

09/708,964

Page 1

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L4 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2002:293477 CAPLUS
 DOCUMENT NUMBER: 136:304056
 TITLE: Hedgehog antagonists, methods and uses related thereto
 INVENTOR(S): Dudek, Henryk; Picicelli, Carmen; Karavanov, Irina
 PATENT ASSIGNEE(S): Curis, Inc., USA
 SOURCE: PCT Int. Appl., 224 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002030462	A2	20020418	WO 2001-US32100	20011015
V: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 2000-240564P P 20001013
 AB The present application is directed to compns. and methods for inhibiting angiogenesis and treating or preventing unwanted cell proliferation, including tumors, by inhibiting the hedgehog pathway, e.g., with an antagonist of the hedgehog pathway such as those disclosed herein. In one embodiment, the subject methods may be used to inhibit unwanted cell proliferation by detg. whether cells overexpress a gli gene, and contacting cells that overexpress gli gene with an effective amt. of a hedgehog antagonist. In preferred embodiments, the unwanted cell proliferation is cancer or benign prostatic hyperplasia. Another aspect of the present invention involves measuring the levels of gli gene expression in order detn. the likelihood that a cancer will develop or to detn. a cancer treatment protocol. Another embodiment of the invention involves methods for using hedgehog antagonists to stimulate surfactant prodn. or lamellated body formation in lung cells, esp. the lung cells of premature infants. In other preferred embodiments, hedgehog antagonists are selected from small mols., hedgehog antibodies, antisense nucleic acids and ribozymes.

IT 469-59-0, Jervine 4449-51-8, Cyclopamine
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (hedgehog pathway antagonists for inhibition of unwanted cell proliferation in cells overexpressing gli gene or to stimulate surfactant prodn. in lung for treatment of premature infants)
 RN 469-59-0 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

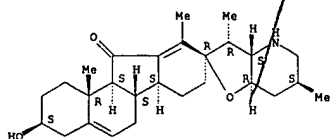
L4 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:507523 CAPLUS
 DOCUMENT NUMBER: 135:87198
 TITLE: Use of steroidal alkaloids to reverse multidrug resistance
 INVENTOR(S): Lissovitich, Mordechai; Lavie, Yaakov
 PATENT ASSIGNEE(S): Yeda Research and Development Co. Ltd., Israel
 SOURCE: PCT Int. Appl., 31 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049279	A2	20010712	WO 2000-11866	20001228
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RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: IL 1999-133809 A 19991230
 AB The invention provides steroidal alkaloids for inhibiting or reversing multidrug resistance in cancer or in bacterial, fungal or parasitic infections. The steroidal alkaloid may be administered to the patient alone or in combination with an anticancer, antibacterial, antifungal or antiparasitic agent. Examples of steroidal alkaloids include members of the solanidane or spirosolane families (e.g. tomatidine), and C-nor-D-homo steroids, e.g. of the jervane or veratramine families.

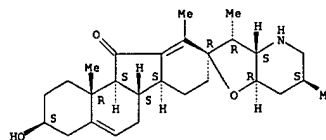
IT 469-59-0, Jervine 4449-51-8, Cyclopamine
 14788-78-4 212968-58-6, Verapaputline 347842-64-2
 RL: BAC (Biological activity or effect); THU (Therapeutic use); BIOL (Biological study); UNCLASSIFIED; THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (steroidal alkaloids for reversal of multidrug resistance)
 RN 469-59-0 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



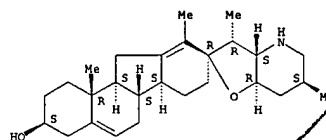
RN 4449-51-8 CAPLUS

L4 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



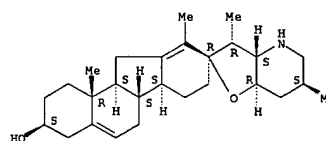
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 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



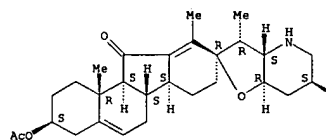
L4 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



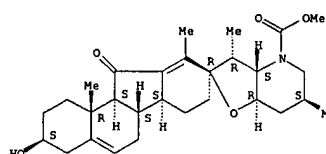
RN 14788-78-4 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(2H)-one, 3-(acetyloxy)-1,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



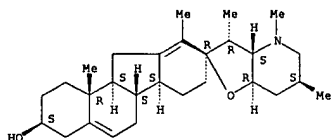
RN 212968-58-6 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridine]-4'-(3'aH)-carboxylic acid, 1,2,3,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-11-oxo-, methyl ester, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L4 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
 RN 347842-64-2 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol,
 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-
 3',4',6',10,11b-pentamethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



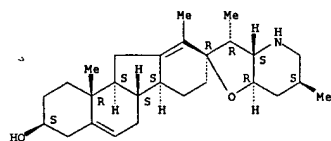
L4 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:447066 CAPLUS
 DOCUMENT NUMBER: 136:210143
 TITLE: Inhibitory effect of steroidal alkaloids on drug transport and multidrug resistance in human cancer cells
 AUTHOR(S): Lavie, Yaakov; Harel-Orbital, Tovi; Gaffield, William; Liscovitch, Mordechai
 CORPORATE SOURCE: Department of Biological Regulation, Weizmann Institute of Science, Rehovot, 76100, Israel
 SOURCE: Anticancer Research (2001), 21(2A), 1189-1194
 CODEN: ANTRD4; ISSN: 0250-7005
 PUBLISHER: International Institute of Anticancer Research
 JOURNAL: Journal
 LANGUAGE: English

AB Intrinsic or acquired resistance of tumor cells to multiple cytotoxic drugs (multidrug resistance, MDR) is a major cause of failure of cancer chemotherapy. MDR is often caused by elevated expression of drug transporters such as P-glycoprotein (P-gp) or multidrug resistance protein (MRP). A no. of compds., termed chemosensitizers, have little or no cytotoxic action of their own, but inhibit (P-gp) or MRP-mediated drug export and are capable of sensitizing MDR cells to the cytotoxic effects of chemotherapeutic drugs. Here the authors examd. the ability of steroidal alkaloids of plant origin, namely the Veratrum sp. alkaloid cyclopamine and the Lycopersicon sp. alkaloid tomatidine, to act as potent and effective chemosensitizers in multidrug resistant tumor cells. Drug uptake was detd. by measuring accumulation of tetramethylrodamine in multidrug resistant NCI AdR human adenocarcinoma cells. Resistance to adriamycin and vinblastine was detd. by utilizing the MTT cell survival assay. Cyclopamine and tomatidine elevate tetramethylrodamine uptake by NCI AdR cells and sensitize the cells to the cytotoxic action of adriamycin and vinblastine. In both cases these agents are comparable in potency and efficacy to verapamil, a reversal agent commonly used in MDR research. It is concluded that steroidal alkaloids of plant origin act as inhibitors of P-gp-mediated drug transport and multidrug resistance and therefore may serve as chemosensitizers in combination chemotherapy with conventional cytotoxic drugs for treating multidrug resistant cancer.

IT 4449-51-8, Cyclopamine
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (inhibitory effect of steroidal alkaloids on drug transport and multidrug resistance in human cancer cells)
 RN 4449-51-8 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol,
 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-
 3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

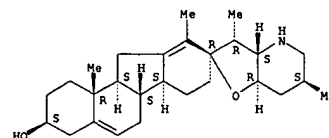


REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2001:44884 CAPLUS
 DOCUMENT NUMBER: 135:41031
 TITLE: Methods using hedgehog protein or hedgehog protein-encoding nucleic acid to stimulate insulin production by pancreatic .beta.-cells
 INVENTOR(S): Habener, Joel F.; Thomas, Melissa K.
 PATENT ASSIGNEE(S): The General Hospital Corporation, USA
 SOURCE: PCT Int. Appl., 63 pp.
 CODEN: PIXX02
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001041786	A1	20010614	WO 2000-US33575	20001208
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BU, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPL. INFO.: US 1999-170282 P 19991210				
AB The invention features a method of treating deficiency of insulin in a patient, comprising administering to a patient in need thereof hedgehog protein or nucleic acid in an amt. effective to raise the level of insulin in the patient. A method is also disclosed for suppressing insulin secretion using hedgehog protein inhibitor, e.g. cyclopamine.				
IT 4449-51-8, Cyclopamine 4449-51-8D, Cyclopamine, derivs.				
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study); USES (Uses) (hedgehog protein or hedgehog protein-encoding nucleic acid to stimulate insulin prodn. by pancreatic .beta.-cells)				
RN 4449-51-8 CAPLUS				
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro- 3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)				

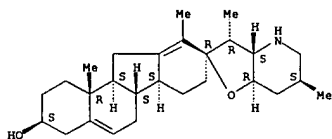
Absolute stereochemistry.



RN 4449-51-8 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol,

L4 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-
3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:283977 CAPLUS
DOCUMENT NUMBER: 134:295995
TITLE: Synthesis, compositions and uses of steroidal alkaloids as regulators of the hedgehog pathway
INVENTOR(S): Beachy, Philip A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 164 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027135	A2	20010419	WO 2000-US28479	20001013
WO 2001027135	A3	20020510		

V: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PK, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-159215P P 19991013
US 2000-229273P P 20000830

OTHER SOURCE(S): MARPAT 134:295995
AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function mutations. Synthesis of cyclopamine, jervine and cyclopamine derivs. is presented.

IT 306387-90-6P 334616-24-9P 334616-28-3P
334616-33-0P 334616-35-2P 334616-36-3P
334616-43-2P 334616-45-4P 334616-53-4P
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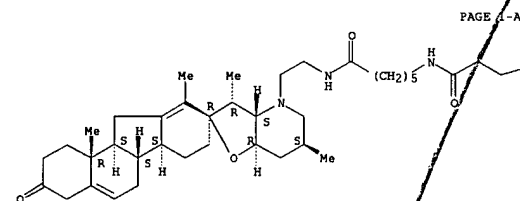
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(synthesis, compns. and uses of steroidal alkaloids as regulators of the hedgehog pathway)

RN 306387-90-6 CAPLUS

CN Benzenepropanamide, N-[6-[[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



PAGE 1-A

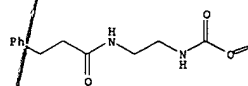
PAGE 1-B

Ph

RN 334616-24-9 CAPLUS
CN Carbanic acid, [2-[(1-oxo-3-phenylpropyl)amino]ethyl]-, (3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-yl ester (9CI) (CA INDEX NAME)

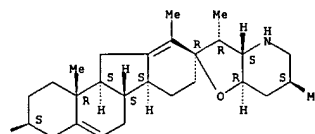
Absolute stereochemistry.

PAGE 1-A



L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

PAGE 1-B

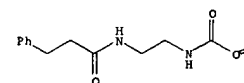


RN 334616-28-3 CAPLUS

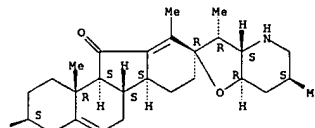
CN Carbanic acid, [2-[(1-oxo-3-phenylpropyl)amino]ethyl]-, (3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

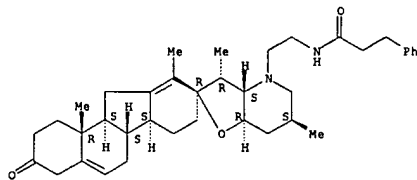


RN 334616-33-0 CAPLUS

CN Benzenepropanamide, N-[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]- (9CI) (CA INDEX NAME)

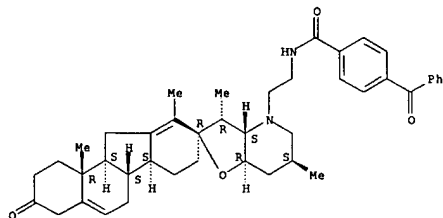
Absolute stereochemistry.

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



RN 334616-35-2 CAPLUS
 CN Benzanide, 4-benzoyl-N-[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]- (9CI) (CA INDEX NAME)

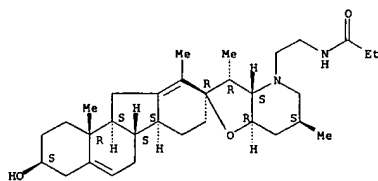
Absolute stereochemistry.



RN 334616-36-3 CAPLUS
 CN Benzenepropanamide, 4-azido-3-iodo-N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

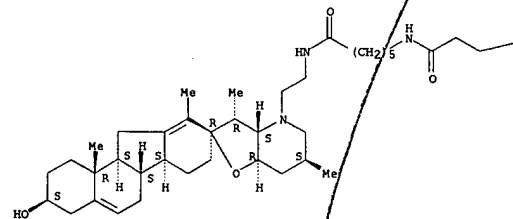
L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



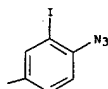
RN 334616-53-4 CAPLUS
 CN Benzenepropanamide, 4-azido-3-iodo-N-[6-[[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

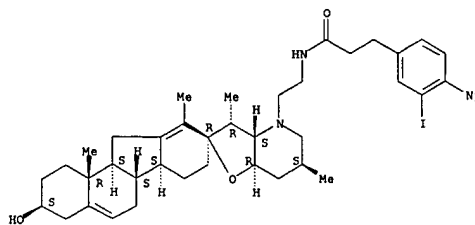
PAGE 1-A



PAGE 1-B

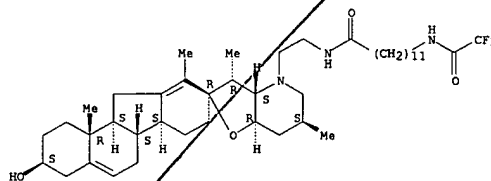


L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



RN 334616-43-2 CAPLUS
 CN Dodecanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-12-[(trifluoroacetyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



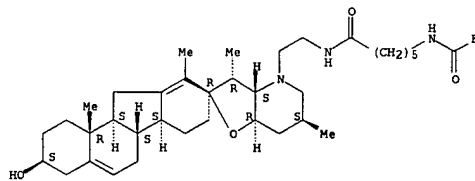
RN 334616-45-4 CAPLUS
 CN Propanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

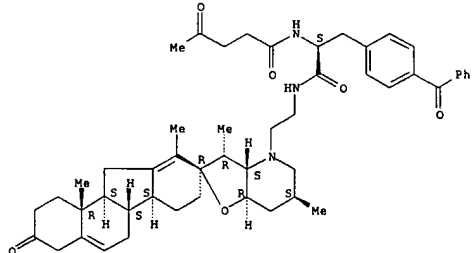
RN 334616-56-7 CAPLUS
 CN Hexanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-6-[(1-oxopropyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 334616-63-6 CAPLUS
 CN Benzenepropanamide, 4-benzoyl-.alpha.-[(1,4-dioxopentyl)amino]-N-[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

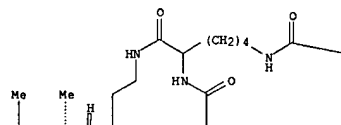


RN 334616-69-2 CAPLUS
 CN Card-20(22)-enolide, 3-[2-[[6-[[5-[[4-benzoylbenzoyl]amino]-6-[[2-[(2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]amino]-6-oxohexyl]amino]-2-oxoethoxy]-12,14-dihydroxy-, (3.beta.,5.beta.,12.beta.)- (9CI) (CA INDEX NAME)

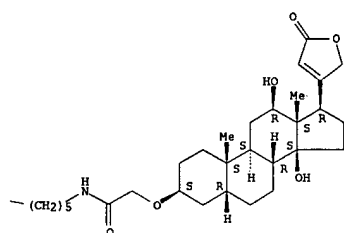
L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

Absolute stereochemistry.

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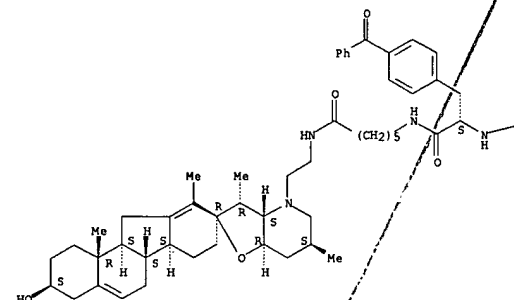


L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

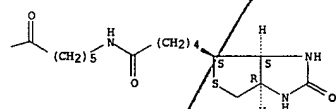
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[6-[[[18]-1-[(4-benzoylphenyl)methyl]-2-[[6-[[[2-(2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]amino]-2-oxoethyl]amino]-6-oxohexyl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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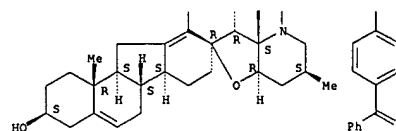


RN 334616-76-1 CAPLUS

CN Benzenepropanamide, 4-azido-3-(iodo-125I)-N-[6-[[[2-[[[3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(3'R)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

PAGE 2-A

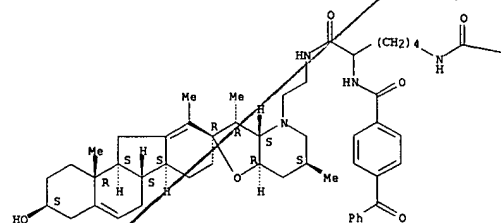


RN 334616-70-5 CAPLUS

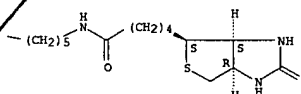
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[6-[[[5-[[4-benzoylbenzoyl]amino]-6-[[[2-[[[2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]amino]-6-oxohexyl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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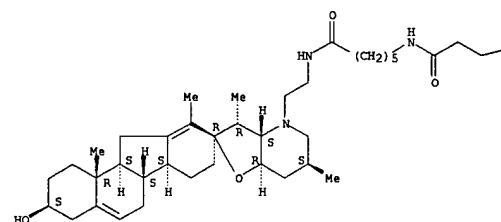


RN 334616-75-0 CAPLUS

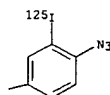
L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

Absolute stereochemistry.

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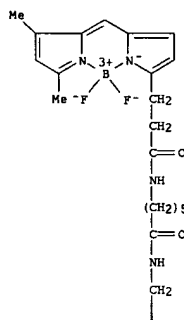


RN 334658-24-1 CAPLUS

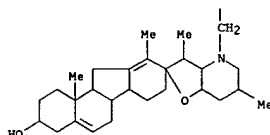
CN Boron, [5-[[3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-N-[6-[[[2-[[[3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]-1H-pyrrole-2-propanamido-.kappa.N]difluoro-, (7R)- (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

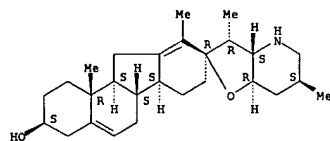
PAGE 1-A



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L4 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:880985 CAPLUS
 DOCUMENT NUMBER: 134:37058
 TITLE: Therapeutic use of an inhibitor of a hedgehog or a hedgehog-related signaling pathway
 INVENTOR(S): Lamb, Jonathan Robert; Hoyne, Gerard Francis; Dailman, Margaret Jane
 PATENT ASSIGNEE(S): Lorantis Limited, UK
 SOURCE: PCT Int. Appl., 78 pp.
 CODEN: PIXKD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000074706	A1	20001214	WO 2000-GB2191	20000605
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LA, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1183040	A1	20020306	EP 2000-935413	20000605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRIORITY APPL. INFO.: GB 1999-13350 A 19990608 GB 1999-21953 A 19990916 WO 2000-GB2191 W 20000605				

AB Use of an inhibitor of a Hedgehog signaling pathway, or an inhibitor of a pathway which is a target of the Hedgehog signaling pathway in the prep. of a medicament for treatment of epithelial cell hyperplasia, fibrosis of tissue, inflammation, cancer or an immune disorder. Also a transgenic animal or cell line capable of expressing a component or an inhibitor of a hedgehog signaling pathway or a target pathway of the hedgehog signaling pathway.

IT 4449-51-8, Cyclopamine
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THW (Therapeutic use); BIOL (Biological study); USES (Uses)
 (Therapeutic use of inhibitor of hedgehog protein or hedgehog-related signaling pathway and transgenic animal or cell line expressing component or inhibitor of these pathways)
 RN 4449-51-8 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2002 ACS

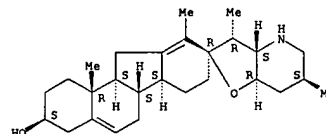
ACCESSION NUMBER: 2000:637045 CAPLUS
 DOCUMENT NUMBER: 133:344307
 TITLE: Effects of oncogenic mutations in Smoothened and Patched can be reversed by cyclopamine
 AUTHOR(S): Taipale, Jussal; Chen, James K.; Cooper, Michael K.; Wang, Baolin; Mann, Randall K.; Milenkovic, Ljiljana; Scotts, Matthew P.; Beachy, Philip A.
 CORPORATE SOURCE: Department of Molecular Biology and Genetics, The Johns Hopkins University School of Medicine, Baltimore, MD, 21205, USA
 SOURCE: Nature (London) (2000), 406(6799), 1005-1009
 CODEN: NATUAS; ISSN: 0028-0836
 PUBLISHER: Nature Publishing Group
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Basal cell carcinoma, medulloblastoma, rhabdomyosarcoma and other human tumors are assocd. with mutations that activate the proto-oncogene Smoothened (SMO) or that inactivate the tumor suppressor Patched (PTCH). Smoothened and Patched mediate the cellular response to the Hedgehog (Hh) secreted protein signal, and oncogenic mutations affecting these proteins cause excess activity of the Hh response pathway. Here we show that the plant-derived teratogen cyclopamine, which inhibits the Hh response, is a potential 'mechanism-based' therapeutic agent for treatment of these tumors. We show that cyclopamine or synthetic derivs. with improved potency block activation of the Hh response pathway and abnormal cell growth assocd. with both types of oncogenic mutation. Our results also indicate that cyclopamine may act by influencing the balance between active and inactive forms of Smoothened.

IT 4449-51-8, Cyclopamine 306387-90-6
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THW (Therapeutic use); BIOL (Biological study); USES (Uses)
 (effects of oncogenic mutations in Smoothened and Patched can be reversed by cyclopamine)

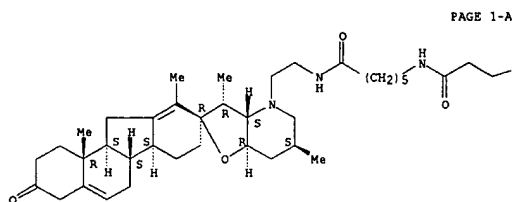
RN 4449-51-8 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 306387-90-6 CAPLUS
 CN Benzenepropanamide, N-[6-[[[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
Absolute stereochemistry.



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REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

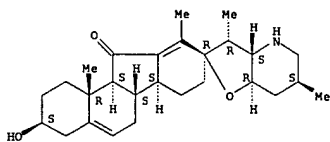
L4 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:49313 CAPLUS
DOCUMENT NUMBER: 133:99549
TITLE: Regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists
INVENTOR(S): Dudek, Henryk; Ji, Benxiu
PATENT ASSIGNEE(S): Ontogeny, Inc., USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041545	A2	20000720	WO 2000-US873	20000113
WO 2000041545	A3	20000928		
V: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6291516	B1	20010918	US 1999-417564	19991014
EP 1143961	A2	20011017	EP 2000-906910	20000113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2001034337	A1	20011025	US 2001-867311	20010529
PRIORITY APPLN. INFO.: US 1999-115642P P 19990113				
US 1999-115944P P 19990210				
US 1999-142124P P 19990702				
US 1999-417564 A 19991014				
WO 2000-US873 W 20000113				

OTHER SOURCE(S): MARPAT 133:99549
AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, patched (ptc) loss-of-function or smoothened gain-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol. in an amt. sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol., in an amt. sufficient for amelioration. In certain embodiments, the subject compds., e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway. Thus, compds. such as jervine, cyclopamine, and forskolin analogs are also effective in inhibition of medulloblastoma.
IT 469-59-0, Jervine 4449-51-8, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

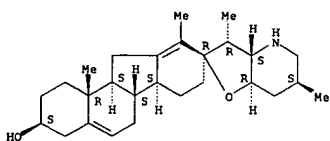
L4 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
(regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



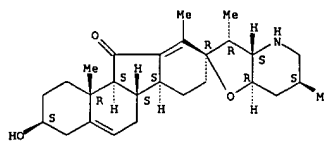
RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:38438 CAPLUS
DOCUMENT NUMBER: 132:202865
TITLE: Effects of Veratrum nigrum alkaloids on central catecholaminergic neurons of renal hypertensive rats
AUTHOR(S): Li, Hua; Gao, Guang-You; Li, Shu-Yuan
CORPORATE SOURCE: Department of Pharmacology, Dalian Medical University, Dalian, 116027, Peop. Rep. China
SOURCE: Acta Pharmacologica Sinica (2000), 21(1), 23-28
CODEN: APSCG5
PUBLISHER: Science Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Aim: To study the central hypotensive mechanism of Veratrum nigrum L var ussuriense Nakai alkaloids (VnA) in renal hypertensive rats (RHR). Methods: The quant. method of immunocytochem. (ICC) was used to observe and detect the effect of VnA (30 .mu.g. cntdot. kg-1, iv) on activity of central catecholaminergic (CA) neurons of C1, C2, A1, and A5 areas in RHR. Results: VnA increased the immunoreactivity (IR) of tyrosine 3-monooxygenase (TH)-immunopos. (IP) neurons of C1, C2, and A5 areas in RHR exptl. group compared with RHR control group [pos. units: (1.9+-0.4), (1.18+-0.23), (1.2+-0.4) vs (0.15+-0.22), (0.31+-0.16), (0.69+-0.20), resp.]; IR of TH-IP neurons of C1 and C2 areas in RHR control group was decreased compared with sham-operated group [pos. units: (0.15+-0.22), (0.31+-0.16) vs (1.45+-0.29), (1.36+-0.25), resp.]. Conclusion: VnA increased the activity of central CA neurons in RHR to exert its hypotensive effect.
IT 469-59-0, Jervine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Veratrum nigrum alkaloids effect on central catecholaminergic neurons in renal hypertension)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:672583 CAPLUS
DOCUMENT NUMBER: 131:267077
TITLE: Use of steroidal alkaloid derivatives as inhibitors of hedgehog signaling pathways
INVENTOR(S): Beachy, Philip A.; Cooper, Michael K.; Porter, Jeffrey A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 136 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9952534	A1	19991021	WO 1999-US7811	19990409
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MW, MY, NZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 2002006931	A1	20020117	US 1998-90622	19980604
CA 2326654	AA	19991021	CA 1999-2326654	19990409
AU 9934860	A1	19991101	AU 1999-34860	19990409
EP 1067939	A1	20010117	EP 1999-916563	19990409
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
JP 2002511415	T2	20020416	JP 2000-543144	19990409
PRIORITY APPLN. INFO.:			US 1998-81186P	P 19980409
			US 1998-81263P	P 19980409
			US 1998-90622	A 19980604
			WO 1999-US7811	W 19990409

OTHER SOURCE(S): MARPAT 131:267077
AB The present invention makes available assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein or aberrant activation of a hedgehog signal transduction pathway, e.g., which involve the use of a steroidal alkaloid or other small mol.
IT 469-59-0, Jervine 4449-51-8, Cyclopamine
RI: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

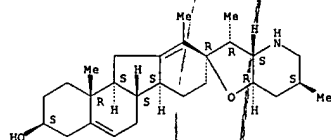
L4 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:639750 CAPLUS
DOCUMENT NUMBER: 131:331613
TITLE: A looking glass perspective: thalidomide and cyclopamine
AUTHOR(S): Gaffield, William; Incardona, John P.; Kapur, Raj P.; Roelink, Henk
CORPORATE SOURCE: Western Regional Research Center, ARS, USDA, Albany, CA, 94710, USA
SOURCE: Cellular and Molecular Biology (Paris) (1999), 45(5), 579-589
CODEN: CMOBEF; ISSN: 0145-5680
PUBLISHER: C.M.B. Association
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with many refs. Numerous naturally-occurring and synthetic compounds that were discovered initially because of their toxic properties, were later shown to possess biol. activities beneficial to humans that enabled them to serve as templates for the development of useful medicinal agents. A prominent example is thalidomide, a synthetic drug that gained notoriety originally due to its catastrophic teratogenicity in humans. The discovery of thalidomide's efficacy in treating several diseases has resulted in the resurgence of the drug to society's usage. A current example of this phenomenon is the plant teratogen cyclopamine (11-deoxojervine), whose deleterious terata-inducing effects were restricted to grazing animals, but whose recently discovered inhibition of Sonic hedgehog signal transduction has provided both the potential to increase our understanding of organogenesis and to serve as a lead compd. in drug development.

IT 4449-51-8, Cyclopamine
RI: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(thalidomide and cyclopamine)

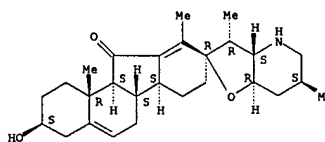
RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



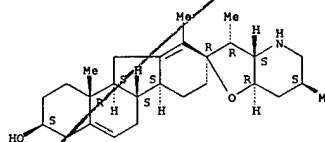
REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

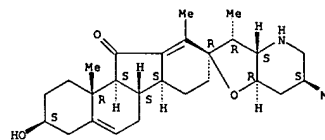
L4 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:436553 CAPLUS
DOCUMENT NUMBER: 131:204460
TITLE: Steroidal alkaloids and stilbenoids from Veratrum taliense
AUTHOR(S): Zhou, Chang Xin; Tanaka, Junichi; Cheng, Christopher H. K.; Higa, Tatsuo; Tan, Ren Xiang
CORPORATE SOURCE: Institute Biotechnology, Department Biological Science Technology, Nanjing Univ., Nanjing, 210093, Peop. Rep. China
SOURCE: Planta Medica (1999), 65(5), 480-482
CODEN: PLIMEA; ISSN: 0032-0943
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Phytochem. investigation of roots and rhizomes of Veratrum taliense yielded a new and six known steroidal alkaloids as well as a new and one reported stilbene deriv. By a combination of spectral methods (IR, MS, 1H- and 13C-NMR, COSY, HMQC, HMBC, and NOESY), the structure of the new alkaloid was established as 15-angeloylgerrmine while the known ones were identified as 15-(2-methylbutyryl)gerrmine, jervine, 3-veratroylylgadenine, gerrmine, veramiline 3-O-beta-D-glucopyranoside and stenophylline B-3-O-beta-D-glucopyranoside. The new stilbenoid, named veraphenol, was detd. to be 2-(3',5'-dihydroxyphenyl)-6-hydroxybenzofuran, and the known one was shown to be resveratrol. The in vitro enzyme assay indicated that 3-veratroylylgadenine and resveratrol are inhibitors of xanthine oxidase. The enzyme inhibitory action of resveratrol, the most active compd. found so far in V. taliense, is dose-dependent with the IC50 value at 30 .mu.M (the IC50 value of allopurinol used as a pos. control in the study is 10 mM).

IT 469-59-0, Jervine
RI: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(steroidal alkaloids and stilbenoids from Veratrum taliense)

RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

09/708,964

Page 11

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L5 ANSWER 1 OF 9 USPATFULL
 ACCESSION NUMBER: 2002:85565 USPATFULL
 TITLE: Cholesterol and hedgehog signaling
 INVENTOR(S): Beachy, Philip A., Baltimore, MD, UNITED STATES
 Porter, Jeffrey A., Belmont, MA, UNITED STATES
 Cooper, Michael K., Baltimore, MD, UNITED STATES
 PATENT ASSIGNEE(S): The Johns Hopkins University School of Medicine (U.S. corporation)

NUMBER	KIND	DATE
US 2002045607	A1	20020418
US 2001-95472	A1	20010911 (9)

Continuation of Ser. No. US 1999-250785, filed on 12 Feb 1999, PATENTED

NUMBER	DATE
US 1998-74714P	19980213 (60)

PRIORITY INFORMATION: US 1998-74714P 19980213 (60)
 DOCUMENT TYPE: Utility
 FILE SEGMENT: APPLICATION
 LEGAL REPRESENTATIVE: LISA A. HAILE, Ph.D., GRAY CARY WARE & FREIDENRICH LLP,
 4365 Executive Drive, Suite 1100, San Diego, CA,
 92121-2133

NUMBER OF CLAIMS: 3
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 7 Drawing Page(s)
 LINE COUNT: 1220

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention sterol-modified hedgehog polypeptides and functional fragments thereof. Methods of identifying compositions which affect hedgehog activity based on inhibition of cholesterol modification of hedgehog protein are described. In one aspect of the invention, the method provides a means for affecting cholesterol biosynthesis or transport in a cell comprising contacting a cell with an effective amount of a compound that affects hedgehog, thereby affecting cholesterol biosynthesis or transport. The effect may be inhibition or stimulation of cholesterol biosynthesis or transport.

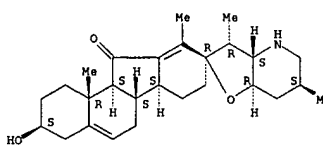
IT 469-59-0, Jervine
 (cholesterol and hedgehog signaling, and modulation of cholesterol biosynthesis and transport)

RN 469-59-0 USPATFULL

CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 1 OF 9 USPATFULL (Continued)



L5 ANSWER 2 OF 9 USPATFULL
 ACCESSION NUMBER: 2002:12550 USPATFULL
 TITLE: INHIBITORS OF HEDGEHOG SIGNALING PATHWAYS, COMPOSITIONS AND USES RELATED THERETO
 INVENTOR(S): BEACHY, PHILIP A., BALTIMORE, MD, UNITED STATES
 COOPER, MICHAEL K., BALTIMORE, MD, UNITED STATES
 PORTER, JEFFREY A., CAMBRIDGE, MA, UNITED STATES

NUMBER	KIND	DATE
US 2002006931	A1	20020117
US 1998-90622	A1	19980604 (9)

NUMBER	DATE
US 1998-81186P	19980409 (60)

PRIORITY INFORMATION: US 1998-81186P 19980409 (60)
 DOCUMENT TYPE: Utility
 FILE SEGMENT: APPLICATION
 LEGAL REPRESENTATIVE: ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA,
 02110-2624

NUMBER OF CLAIMS: 22
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 7 Drawing Page(s)
 LINE COUNT: 3884

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention makes available assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein comprising contacting a cell sensitive to the hedgehog protein with a steroidal alkaloid, or other small molecule, in a sufficient amount to reduce the sensitivity of the cell to the hedgehog protein.

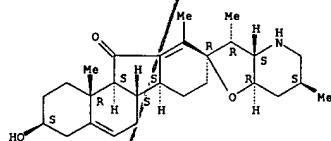
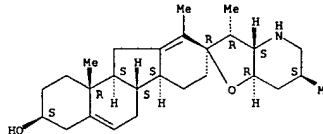
IT 469-59-0, Jervine 4449-51-8, Cyclopamine
 (use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)

RN 469-59-0 USPATFULL

CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 2 OF 9 USPATFULL (Continued)



RN 4449-51-8 USPATFULL

CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 3 OF 9 USPATFULL

ACCESSION NUMBER: 2001:218003 USPATFULL
 TITLE: Stem cells of the islets of langerhans and their use in treating diabetes mellitus
 INVENTOR(S): Habener, Joel E., Newton Center, MA, United States
 Zulewski, Henryk, Geneva, Switzerland
 Abraham, Elizabeth J., Quincy, MA, United States
 Thomas, Melissa K., Boston, MA, United States
 Vallejo, Mario, Madrid, Spain

NUMBER	KIND	DATE
US 2001046489	A1	20011129
US 2000-731261	A1	20001206 (9)

NUMBER	DATE
US 1999-169082P	19991206 (60)
US 2000-215109P	20000628 (60)
US 2000-238800P	20001006 (60)

DOCUMENT TYPE: APPLICATION
 FILE SEGMENT:
 LEGAL REPRESENTATIVE: Kathleen M. Williams, Ph.D, Palmer & Dodge, LLP, One Beacon Street, Boston, MA, 02108
 NUMBER OF CLAIMS: 41
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 19 Drawing Page(s)
 LINE COUNT: 2114

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

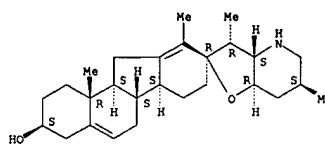
AB Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for *ex vivo* differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogeneically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

IT 4449-51-8, Cyclopamine
 (isolation, culture, and transplantation of nestin-pos. pancreatic stem cells for diabetes treatment)

RN 4449-51-8 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 3 OF 9 USPATFULL (Continued)



L5 ANSWER 4 OF 9 USPATFULL

ACCESSION NUMBER: 2001:188704 USPATFULL
 TITLE: Regulators of the hedgehog pathway, compositions and uses related thereto
 INVENTOR(S): Dudek, Henryk, Wellesley, MA, United States
 Ji, Benxiu, Sharon, MA, United States

NUMBER	KIND	DATE
US 2001034337	A1	20011025
US 2001-687311	A1	20010529 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1999-417564, filed on 14 Oct 1999, PENDING	

NUMBER	DATE
US 1999-115642P	19990113 (60)
US 1999-119594P	19990210 (60)
US 1999-142124P	19990702 (60)

DOCUMENT TYPE: APPLICATION
 FILE SEGMENT:
 LEGAL REPRESENTATIVE: ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624

NUMBER OF CLAIMS: 38
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 19 Drawing Page(s)
 LINE COUNT: 3831

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

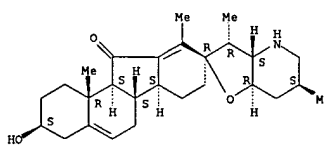
AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule in an amount sufficient to control the aberrant growth state e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating to consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule, in an amount sufficient to ameliorate the in certain embodiments, the subject compounds, e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway.

IT 469-59-0, Jervine 4449-51-8, Cyclopamine
 (regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)

RN 469-59-0 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

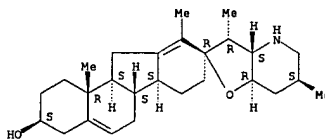
Absolute stereochemistry.

L5 ANSWER 4 OF 9 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 5 OF 9 USPATFULL

ACCESSION NUMBER: 2001:165614 USPATFULL
 TITLE: Stem cells and their use in transplantation
 INVENTOR(S): Moss, Peter Ian, London, Great Britain
 Walters, David Martin, London, Great Britain
 Pointer, Graham, London, Great Britain

NUMBER	KIND	DATE
US 2001024824	A1	20010927
US 2000-731255	A1	20001206 (9)

NUMBER	DATE
US 1999-169082P	19991206 (60)
US 2000-215109P	20000628 (60)
US 2000-238880P	20001006 (60)

DOCUMENT TYPE: Utility
 FILE SEGMENT: APPLICATION
 LEGAL REPRESENTATIVE: Palmer & Dodge, LLP, One Beacon Street, Boston, MA, 02108

NUMBER OF CLAIMS: 127
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 18 Drawing Page(s)
 LINE COUNT: 2446

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

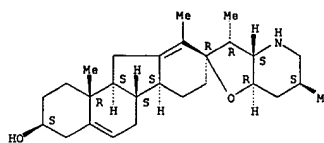
AB Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogeneically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

IT 4449-51-8, Cyclopamine
 (isolation, culture, and transplantation of nestin-pos. pancreatic stem cells for diabetes treatment)

RN 4449-51-8 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 5 OF 9 USPATFULL (Continued)



L5 ANSWER 6 OF 9 USPATFULL

ACCESSION NUMBER: 2001:158338 USPATFULL
 TITLE: Regulators of the hedgehog pathway, compositions and uses related thereto
 INVENTOR(S): Dudek, Henryk, Wellesley, MA, United States
 Ji, Benxiu, Sharon, MA, United States
 PATENT ASSIGNEE(S): Curis, Inc., Cambridge, MA, United States (U.S. corporation)

NUMBER	KIND	DATE
US 6291516	B1	20010918
US 1999-417564		19991014 (9)

NUMBER	DATE
US 1999-115642P	19990113 (60)
US 1999-119594P	19990210 (60)
US 1999-142124P	19990702 (60)

DOCUMENT TYPE: Utility
 FILE SEGMENT: GRANTED
 PRIMARY EXAMINER: Krass, Frederick
 LEGAL REPRESENTATIVE: Vincent, Matthew P., Halstead, David P. Ropes & Gray
 NUMBER OF CLAIMS: 16
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 19 Drawing Figure(s); 19 Drawing Page(s)
 LINE COUNT: 3730

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

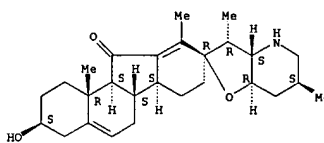
AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule in an amount sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule, in an amount sufficient to ameliorate the in certain embodiments, the subject compounds, e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway.

IT 469-59-0, Jervine 4449-51-8, Cyclopamine
 (regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)

RN 469-59-0 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

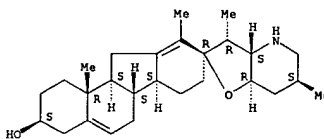
Absolute stereochemistry.

L5 ANSWER 6 OF 9 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 7 OF 9 USPATFULL
 ACCESSION NUMBER: 2001:152946 USPATFULL
 TITLE: Cholesterol and hedgehog signaling
 INVENTOR(S): Beachy, Philip A., Baltimore, MD, United States
 Porter, Jeffrey A., Belmont, MA, United States
 Cooper, Michael K., Baltimore, MD, United States
 PATENT ASSIGNEE(S): The Johns Hopkins University School of Medicine,
 Baltimore, MD, United States (U.S. corporation)

NUMBER	KIND	DATE
US 6288048	B1	20010911
US 1999-250195		19990212 (9)

NUMBER	DATE
US 1998-74714P	19980213 (60)

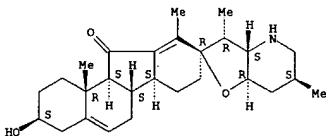
PATENT INFORMATION: US 1998-74714P 19980213 (60)
 DOCUMENT TYPE: Utility
 FILE SEGMENT: GRANTED
 PRIMARY EXAMINER: Krass, Frederick
 LEGAL REPRESENTATIVE: Gray Cary Ware & Freidenrich LLP, Haile, Lisa A.
 NUMBER OF CLAIMS: 3
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 11 Drawing Figure(s); 7 Drawing Page(s)
 LINE COUNT: 1222
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention sterol-modified hedgehog polypeptides and functional fragments thereof. Methods of identifying compositions which affect hedgehog activity based on inhibition of cholesterol modification of hedgehog protein are described. In one aspect of the invention, the method provides a means for affecting cholesterol biosynthesis or transport in a cell comprising contacting a cell with an effective amount of a compound that affects hedgehog, thereby affecting cholesterol biosynthesis or transport. The effect may be inhibition, or stimulation of cholesterol biosynthesis or transport.

IT 469-59-0, Jervine
 (cholesterol and hedgehog signaling, and modulation of cholesterol biosynthesis and transport)

RN 469-59-0 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 8 OF 9 USPATFULL
 ACCESSION NUMBER: 2000:67202 USPATFULL
 TITLE: Method and apparatus for conditioning gas for medical procedures having humidity monitoring and recharge alert
 INVENTOR(S): Ott, Douglas E., 682 Foster Rd., Macon, GA, United States 31210
 Schaefer, John F., Macon, GA, United States
 Gray, Robert I., Macon, GA, United States
 PATENT ASSIGNEE(S): Ott, Douglas E., Macon, GA, United States (U.S. individual)

NUMBER	KIND	DATE
US 6068609		20000530
US 1998-81186		19980519 (9)

PATENT INFORMATION: US 6068609 20000530
 APPLICATION INFO.: US 1998-81186 19980519 (9)
 DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Bockelman, Mark
 ASSISTANT EXAMINER: Thompson, Michael M
 LEGAL REPRESENTATIVE: Needle & Rosenberg, P.C.
 NUMBER OF CLAIMS: 42
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 5 Drawing Figure(s); 4 Drawing Page(s)
 LINE COUNT: 991
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An apparatus for conditioning gas for use in a medical procedure, such as endoscopy, the gas being received into the apparatus from a gas source. The apparatus comprises a housing defining a chamber having an entry port and an exit port. A humidification means comprising at least one water-retainer layer is disposed within the chamber in the path of travel of the gas for humidifying the gas as it passes through the chamber. A humidity sensor is disposed within the chamber that senses the humidity of the gas exiting the chamber. A monitoring circuit is connected to the humidity sensor that detects when the chamber requires a recharge of liquid based on the humidity of the gas in the chamber, and generates a recharge signal indicative thereof. A charging port on the housing provides access into the chamber to recharge the chamber with water. A heating element and temperature sensor are also disposed within the chamber. A control circuit further regulates the temperature of the gas exiting the chamber.

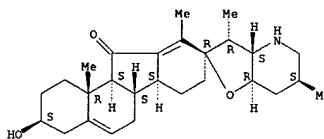
IT 469-59-0, Jervine 4449-51-8, Cyclopamine
 (use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)

RN 469-59-0 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

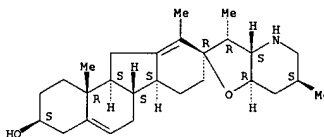
L5 ANSWER 7 OF 9 USPATFULL (Continued)

L5 ANSWER 8 OF 9 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 9 OF 9 USPATFULL

ACCESSION NUMBER: 2000:38195 USPATFULL
 TITLE: Method and apparatus for rapid determinations of voltage and current in wires and conductors
 INVENTOR(S): Singer, Jerome R., 2917 Avalon Ave., Berkeley, CA, United States 94705
 Libove, Joel M., 34 Canyon View Dr., Orinda, CA, United States 94563

NUMBER	KIND	DATE
US 6043641		20000328
US 1998-01263		19980519 (9)
Continuation-in-part of Ser. No. US 1998-25043, filed on 17 Feb 1998		
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Do, Diep N.	
LEGAL REPRESENTATIVE:	Cohen, Howard	
NUMBER OF CLAIMS:	22	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	7 Drawing Figure(s); 3 Drawing Page(s)	
LINE COUNT:	489	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

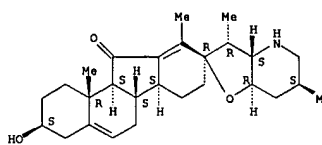
AB A device for non-contact, non-invasive measurement of current or power in a wire, cable or conductor includes a small coil having multiple turns with a thin ferromagnetic strip. The coil may be secured to a wand or housing adapted to be used to place the coil in close proximity to the wire, cable or conductor, whereby a voltage is induced in the coil. An amplifier and/or an analog or digital signal processor is utilized to increase sensitivity. A readout indicates the magnitude of the induced voltage, and a scaling device renders the readout display indicative of the current or power in the wire, cable, or conductor. The readout may comprise a digital display, a series of light emitting devices, an oscilloscope, a digital computer display system, or a flashing light emitting device having a flash rate proportional to the magnitude of the voltage. The device may be constructed in a wand or pen-like fashion, with the coil and strip incorporated into the wand. The device may be combined with a voltage sensor to read out relative voltages.

IT 469-59-0, Jervine 4449-51-8, Cyclopamine
 (use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)

RN 469-59-0 USPATFULL
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

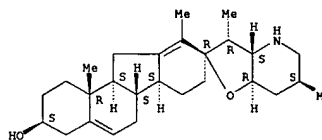
L5 ANSWER 9 OF 9 USPATFULL (Continued)



RN 4449-51-8 USPATFULL

CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3',4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



09/708,964

Page 17

=> d all 1-37

L7 ANSWER 1 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1966:449755 CAPLUS
 DN 65:49755
 OREF 65:9343a-z
 TI Isolation and identification of alkaloids from *Veratrum lobelianum*. I
 AU Shinkarenko, A. L.; Bondarenko, N. V.
 CS Pharm. Inst., Pyatigorsk
 SO Rast. Resuray (1966), 2(1), 45-50
 DT Journal
 LA Russian
 CC 61 (Plant Biochemistry)
 AB The total amt. of alkaloids in the plants from Northern Caucasus at 1217-2000 m. above sea level was 0.23-1.4 in the leaves, 0.6- 1.86 in the roots, and 0.09-1.41% in the stalks, during vegetation, blooming, and fruiting. The ether was replaced by CHCl₃ in Poethke gravimetric method (CA 31, 81107). The presence of 16 individual substances, with pos. Dragendorff test, was established in the CHCl₃ ext. by formamide paper chromatography, with CHCl₃, CHCl₃-C₆H₆, and CHCl₃-dioxane as solvents. Jervine, by Poethke method, and gerdine, by chromatography, were isolated and identified. At altitudes of 1800 to 2000 m., the alkaloid content was generally higher. 27 references.

L7 ANSWER 2 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1966:449754 CAPLUS
 DN 65:49754
 OREF 65:9343d-e
 TI Mineral nutrient studies in sugarcane
 AU Bishop, R. T.
 SO Proc. Ann. Congr. S. African Sugar Technologists' Assoc. (1965), 39, 128-33
 DT Journal
 LA English
 CC 61 (Plant Biochemistry)
 AB The abs. amts. of N, P, K, Ca, Mg, and Na in the aboveground portions of the plant were detd. during maturation. The correlation coeffs. between concns. of nutrients (N, P, K, Ca, Mg, Na, Cu, and Mn) in the third leaf blade and environmental factors (rainfall, soil moisture, stalk increment, air temp., total radiation, evapn., and soil temp.) are presented. The effect of the age of the crop on concn. of nutrients in third leaf blades is considered.

L7 ANSWER 3 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1966:414987 CAPLUS
 DN 65:14987
 OREF 65:2013b-c
 TI Teratogenic compounds of *Veratrum californicum* (Durand). I. Preparation and characterization of fractions and alkaloids for biologic testing
 AU Keeler, Richard F.; Binns, Wayne
 CS Animal Disease & Parasite Res. Div., U.S. Dept. of Agr., Ames, IA
 SO Can. J. Biochem. (1966), 44(6), 819-28
 DT Journal
 LA English
 CC 66 (Mammalian Pathological Biochemistry)
 AB The isolation and identification of 4 known alkaloids (jervine, veratrosine, pseudojervine, and isorubijervine) was achieved from teratogenic fractions of *V. californicum*. Two addnl. alkaloids, not previously reported and designated alkaloids X and V, were also isolated from these fractions and partially characterized.

L7 ANSWER 4 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1966:414986 CAPLUS
 DN 65:14986
 OREF 65:2012f-h, 2013a-b
 TI Mechanism for bradycardia induced by acute systemic anoxia in the dog
 AU Litwin, J.; Skolasinska, K.
 CS School Med., Warsaw
 SO Arch. Ges. Physiol. (1966), 289(2), 109-21
 DT Journal
 LA English
 CC 66 (Mammalian Pathological Biochemistry)
 AB Studies on acute systemic anoxia were carried out on 46 heparinized, chloralose-anesthetized mongrel dogs weighing 9.5-20.0 kg., some of which were allowed to breathe spontaneously, others were artificially ventilated, tubocurarine.HCl 0.1 mg./kg. body wt., being administered intravenously to block the neuromuscular transmission. The artificially ventilated animals were divided into a closed- and an open-chest group. All animals exhibited a biphasic response of the heart, consisting of a primary tachycardia and a secondary bradycardia; the latter was marked and amounted to 45.8 and 67.2% redn. of heart rate in artificially ventilated and in spontaneously breathing animals, resp. The primary tachycardia was usually more distinct in spontaneously breathing animals as compared to those in which the respiration was controlled. Since bilateral vagotomy, atropinization, and ganglionic blockade considerably reduced the intensity of bradycardia and, in some cases, abolished it completely, it appeared that anoxic bradycardia was due mainly to an increased tone of the vagal cardioinhibitory center. Moderate slowing of the heart, which persisted in some expts., following vagotomy, atropinization, and ganglionic blockade, appeared to be the outcome of the local depressant action of severe anoxia on the heart itself, but the local action of anoxia was only of secondary importance as compared to the nervous vagal mechanism. On the other hand, spinal-cord destruction and bilateral adrenalectomy both caused a significant enhancement of secondary anoxic bradycardia, indicating that a strong stimulation of the sympatho-adrenal system occurred throughout the anoxia, resulting in primary tachycardia and, in later stages of anoxia, opposing vagal slowing of the heart. A very marked exaggeration of bradycardia after adrenalectomy alone proved that increased release of catechol amines from the adrenal medulla was of paramount importance in this regard. Anoxic bradycardia did not result from stimulation of either baro- or chemoreceptors in the sino-aortic arch; some other mechanism, gave rise to the increased vagal discharge to the heart accounting for the anoxic bradycardia and constituted the principal factor responsible for cardiac slowing in anoxia; the reflexes from carotid and aortic receptors appeared to be of secondary importance. Such a mechanism may consist either in a reflex initiated at some unidentified receptors or in a central stimulating effect of anoxia on vagal cardioinhibitory neurons.

L7 ANSWER 5 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1966:404189 CAPLUS
 DN 65:4189
 OREF 65:774a-b
 TI Photochemical reactions, XXXVI. Photolytic degradation of O-acetylervine: structure and photochemical reactions of the nitrogen-free main products
 AU Bozzato, G.; Schaffner, K.; Jager, O.
 CS Eidg. Tech. Hochschule, Zurich, Switz.
 SO Chimia (Aarau) (1966), 20(4), 114-16
 DT Journal
 LA German
 CC 42 (Steroids)
 GI For diagram(s), see printed CA issue.
 AB cf. CA 64, 19714g. On irradiation in diowane with light λ 253.7 m μ , O-acetylervine (I) reacted to form II, III, and IV. The N-acetyl deriv. (V) was photostable under the same conditions. III, m. 135-6.degree., was photodecarbonylated to VI, m. 108.degree., and IV, m. 128.5.degree., was photohydrolyzed to VII, m. 111.degree.. III formed an aldokime (VIII), m. 141-2.degree., which was converted (MeSO₃H, pyridine) to the nitrile (IX), m. 152.degree.. Treatment of VI with 0.1N KOH at room temp. yielded X, m. 158-66.degree., identical with the product formed from XI (Fried and Klingsberg, CA 48, 13701b) by hydrogenation (Pd-C, EtOH) to XII, m. 139.degree., followed by hydrolysis with K₂CO₃-MeOH to XIII, m. 100.degree. and epimerization (Me₂SO, KO-tert-Bu) to X. The vinylidene ether structure of IV was shown by ozonolysis and hydrolytic decompn. to the acetaldehyde, identified by its 2,4-dinitrophenylhydrazone (30% yield), and by hydrogenation (Pd-C, EtOH) of the vinylidene double bond to XIV, m. 143.5.degree.. IV and XIV were hydrolyzed (KOH, boiling MeOH) to XV, m. 127.5.degree., and XVI, m. 189-90.degree., resp. XIV was also reacylated to IV, which was chem. hydrolyzed (H₂SO₄, glacial HOAc) to VII, in turn converted (KOH, boiling aq. MeOH) to XVII, m. 108.degree.. XVII was acetylated to the acetonyketone (XVIII), m. 92.degree.. Ir, uv, and N.M.R. data and $[\alpha]_D$ for the various compds. were reported and discussed.

L7 ANSWER 6 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1966:404188 CAPLUS
 DN 65:4188
 OREF 65:774a-b
 TI Rearrangement in the substitution reaction of 3-oxo-4.beta.-bromo-5.beta.-steroids
 AU Sato, Yasuo; Muko, Masaaki; Ogaki, Yuichi; Takahashi, Tomoyoshi; Kimura, Takako; Aoki, Hiromitsu; Hagitani, Akira
 CS St. Paul's Univ., Tokyo
 SO Bull. Chem. Soc. Japan (1966), 39(4), 855
 DT Journal
 LA English
 CC 42 (Steroids)
 AB 4.beta.-Bromo-5.beta.-cholestan-3-one (8 g.) in 280 cc. AcOH refluxed 6 hrs. under N with 56 g. AcOK yielded 2.6 g. 2.beta.-acetoxy-5.beta.-cholestan-3-one, m. 149-51.degree., $[\alpha]_D$ 589 8.0.degree., $[\alpha]_D$ 400 8.0.degree., $[\alpha]_D$ 308 -195.0.degree., $[\alpha]_D$ 285 205.0.degree.. Me 4.beta.-bromo-3-oxocholane (2 g.), 11 g. AcOK, and 55 cc. AcOH yielded similarly 1.3 g. Me 2.beta.-acetoxy-3-oxocholane, m. 168.5-70.degree., $[\alpha]_D$ 589 5.5.degree., $[\alpha]_D$ 380 9.0.degree., $[\alpha]_D$ 309 -190.0.degree., $[\alpha]_D$ 285 230.0.degree..

L7 ANSWER 7 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1966:96686 CAPLUS
 DN 64:96686
 OREF 64:18245a-b
 TI Some pharmacologic effects of Veratrum alkaloids in sheep and goats
 AU Buck, W. B.; Keeler, R. F.; Binns, Wayne
 CS Natl. Animal Disease Lab., Ames, IA
 SO Am. J. Vet. Res. (1966), 27(116), 140-54
 DT Journal
 LA English
 CC 68 (Pharmacodynamics)
 AB Infusion of EtOH exts. and purified alkaloids from V. californicum and ester alkaloidal mixts. from V. viride into the jugular vein resulted in a potent hyperglycemic effect in intact and adrenalectomized female sheep and goats. When large amts. of alkaloid were infused, there was a concomitant increase in electroencephalogram (EEG) wave amplitude, and this was followed in a few sec. by complete cessation of EEG activity. This treatment also reduced respiration and stimulated skeletal muscle and gastrointestinal activity. Administration of O by artificial respiration reversed the effects on the EEG and enabled the animals to recover rapidly. The hyperglycemic effect, which may have resulted from an inhibition of glucose utilization, probably caused cessation of EEG activity and may explain the mechanism by which Veratrum produces congenital cyclopic deformities in lambs (ibid. 24(103), 1164-75(1963)). 17 references.

L7 ANSWER 8 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1965:498716 CAPLUS
 DN 63:98716
 OREF 63:18209h,18210a-c
 TI C-N or D-homosteroids and related alkaloids. IV. 11-Deoxojervine, a new alkaloid from Veratrum species
 AU Masamune, Tadashi; Mori, Yoichi; Takasugi, Mitsuo; Murai, Akio; Ohuchi, Shigehiro; Sato, Norio; Katsui, Nobukatsu
 CS Hokkaido Univ., Sapporo
 SO Bull. Chem. Soc. Japan (1965), 38(8), 1374-8
 DT Journal
 LA English
 CC 42 (Steroids)
 AB cf. CA 62, 14774c. The benzene exts. of alkalinized, ground roots of Veratrum album var glandiflorum subjected to sepn. by a modified Jacobs' procedure (cf. Stoll, et al., CA 50, 10748g), gave 11-deoxojervine (I) probably identical with Takaoka's sterol (Nippon Kagaku Zasshi 60, 1090(1939)), veratramine (II), rubijervine, solanidine, and .beta.-sitosterol. I ($[\alpha]_D$ 23D -44.2.degree.) m. 236-8.degree. (MeOH) (crystals contained solvent); on drying at the b.p. of xylene, the m.p. changed to 237-8.degree. and the ir spectrum also changed. Acetylation of 101 mg. I with 1 ml. Ac₂O and 1 ml. pyridine at 100.degree. gave 84 mg. 3-N-diacyl-11-deoxojervine (III). III, recrystd. from aq. alc., m. 168-4.degree. (crystals contained solvent), resolidified and again m. 195-7.degree.; III dried at the b.p. of xylene m. 195-7.degree. and had $[\alpha]_D$ 23D 1.1.degree.. Attempted redn. of I with LiAlH₄ or Li in liquid NH₃ gave quant. recovery of I. I (220 mg.) in 50 ml. MeOH treated with 3.1 ml. concd. H₂SO₄ and 55 mg. Fe₂(SO₄)₃ in the cold, and the mixt. stirred 5 hrs. at room temp. gave 10 mg. II. Wolff-Kishner redn. of 5 g. jervine according to Barton's procedure (B., et al., CA 49, 12506e) gave 1.1 g. I, and 0.45 g. conjugated diene (IV), m. 211-13.degree.. $[\alpha]_D$ 23D, 3.5.degree. when recrystd. from Me₂CO or MeOH. Acetylation of 77 mg. IV with Ac₂O-pyridine at 100.degree. gave 48 mg. O,O,N-triacyl deriv., m. 116-18.degree., $[\alpha]_D$ 23D 46.degree. after recrystn. from MeOH-EtOH. On the basis of these facts and of the ir, uv, and N.M.R. spectra, the structure shown for IV is suggested. Jervine-11.beta.-ol (507 mg.) in 500 ml. boiling BuOH treated over 5 hrs. with 36 g. Na, and the mixt. refluxed an addnl. 1.5 hrs., gave 83 mg. IV, which formed the expected triacyl deriv. (m. 120-1.degree.). Direct transformation of I into II supports the .alpha.-configuration of the H on C-9. The ir, uv, and N.M.R. spectra of many of the compds. are given.

L7 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1965:498715 CAPLUS
 DN 63:98715
 ORF 63:18208c-h,18209a-h
 TI Reactions of epoxides. VII. Acid-catalyzed reactions of 13,17a-epoxy- and 17a,18-epoxy-C-nor-D-homospirostan
 AU Coxon, J. M.; Hartshorn, M. P.; Kirk, D. N.
 CS Univ. Canterbury, Christchurch, N. Z.
 SO Tetrahedron (1965), 21(9), 2489-99
 DT Journal
 LA English
 CC 42 (Steroids)
 GI For diagram(s), see printed CA Issue.
 AB cf. CA 63, 8447c. C-Nor-D-homo-13(17a)-olefin (I, 500 mg.) in 80 ml. dioxane treated with 0.1M aq. HOBr 40 min. at 20.degree. and the dil. mixt. filtered gave 480 mg. bromohydrin (II, R : Br) (III), m. 130-1.degree. (ligroine), [alpha]_D -36.degree. (C 0.5). III (135 mg.) in 10 ml. alc. kept 18 hrs. at 20.degree. with 150 mg. KOH gave 80 mg. 3.beta.-hydroxy-13.alpha.,17.alpha.-epoxide, m. 215-18.degree., converted by acylation with 1:10 Ac2O-C5H5N in 16 hrs. to 3.beta.-acetoxy-13.alpha.,17.alpha.-epoxide (IV), m. 194-6.degree.. I (R : OH) (V, 3 g.) in 25 ml. C5H5N treated dropwise at 0.degree. with 2.5 ml. SOCl2 and the dild. mixt. extd. with Et2O gave the 13.beta.,17a.beta.-epoxide (VII), m. 187.5-9.0.degree.. Since V is readily obtained by acid-catalyzed hydrolysis of the mixed .alpha.- and .beta.-epoxides IV and VI, formed by epoxidation of I, the tedious chromatographic sepn. to produce IV and VI can be avoided. The ready availability of the tetrasubstituted epoxides led to their inclusion in studies of BF3-catalyzed rearrangements. IV (1 g.) in 100 ml. anhyd. C6H6 treated 30 sec. with 1 ml. BF3-Et2O and dild. with Et2O, the washed soln. evapd. and chromatographed on 80 g. Al2O3, eluted with 8:1 ligroine-C6H6 and the eluate (333 mg.) crystd. from C5H12 and MeOH gave the 8(14), 13(17a)-diene (VII), m. 160-2.degree., [alpha]_D -62.degree. (c 1.17). Elution with 1:1 ligroine-C6H6 gave 300 mg. gum (VIII), [alpha]_D -53.degree. (C 1.33). Further elation with C6H6 gave 180 mg. hecogenin acetate, m. 250-2.degree. (MeOH), [alpha]_D -7.degree., and final elution with Et2O gave the fluorohydrin II (R : F) (IX), m. 176-7.degree. (C6H14), [alpha]_D -62.degree. (c 0.73). VIII (175 g.) treated with 0.5 ml. BzH in 10 ml. alc. contg. 60 mg. KOH 18 hrs. at 20.degree. and the product isolated with Et2O, chromatographed on Al2O3, and eluted with C6H6 gave 143 mg. 13-acetyl-C-nor compd. (X) benzylidene deriv., [alpha]_D -38.degree. (c 0.93). Elution with Et2O gave 29 mg. 3.beta.-hydroxy-C-nor-D-homo-17a ketone (XI), [alpha]_D -42.degree. (C 1.12). IX (100 mg.) and 100 mg. KOH heated under reflux 4 hrs. in 25 ml. 90% aq. alc. gave the 3.beta.-hydroxy-13.alpha.,17a.alpha.-oxide, acetylated to IV. IV (800 mg.) and 0.8 ml. BF3-Et2O kept 1 hr. in 80 ml. anhyd. Et2O gave 646 mg. IX. IX (140 mg.) and 0.16 ml. BF3-Et2O kept 22 min. in 16 ml. C6H6 gave material, lambda. 251 m.mu. (epsilon. 3200) contg. 14% diene VII. Crystn. from MeOH gave 20 mg. hecogenin acetate, and chromatography of the residues on Al2O3 gave a ketonic fraction consisting mainly of X and unreacted IX. VI (500 mg.) in 50 ml. dry C6H6 treated 3 min. with 0.5 ml. BF3-Et2O and isolation of the steroidal product gave 17a.beta.-hydroxy-17a.alpha.-methyl-.DELTA.8(14)-olefin (XII), m. 170-1.degree. (MeOH), [alpha]_D -94.degree. (c 1.03), deep yellow color with C(NO2)4, dehydrated with SOCl2-C5H5N to VII, thus supporting the trans-13.alpha.,17a.beta.-configuration of XII. The reaction between VI and BF3 in Et2O gave only unreacted VI and the fluorohydrin (XIII), m. 130-7.degree. (decompn.), [alpha]_D -50.degree.

L7 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2002 ACS (Continued)

L7 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2002 ACS (Continued)
 AN 1965:498715 CAPLUS
 DN 63:98715
 ORF 63:18208c-h,18209a-h
 TI Reactions of epoxides. VII. Acid-catalyzed reactions of 13,17a-epoxy- and 17a,18-epoxy-C-nor-D-homospirostan
 AU Coxon, J. M.; Hartshorn, M. P.; Kirk, D. N.
 CS Univ. Canterbury, Christchurch, N. Z.
 SO Tetrahedron (1965), 21(9), 2489-99
 DT Journal
 LA English
 CC 42 (Steroids)
 GI For diagram(s), see printed CA Issue.
 AB cf. CA 63, 8447c. C-Nor-D-homo-13(17a)-olefin (I, 500 mg.) in 80 ml. dioxane treated with 0.1M aq. HOBr 40 min. at 20.degree. and the dil. mixt. filtered gave 480 mg. bromohydrin (II, R : Br) (III), m. 130-1.degree. (ligroine), [alpha]_D -36.degree. (C 0.5). III (135 mg.) in 10 ml. alc. kept 18 hrs. at 20.degree. with 150 mg. KOH gave 80 mg. 3.beta.-hydroxy-13.alpha.,17.alpha.-epoxide, m. 215-18.degree., converted by acylation with 1:10 Ac2O-C5H5N in 16 hrs. to 3.beta.-acetoxy-13.alpha.,17.alpha.-epoxide (IV), m. 194-6.degree.. I (R : OH) (V, 3 g.) in 25 ml. C5H5N treated dropwise at 0.degree. with 2.5 ml. SOCl2 and the dild. mixt. extd. with Et2O gave the 13.beta.,17a.beta.-epoxide (VII), m. 187.5-9.0.degree.. Since V is readily obtained by acid-catalyzed hydrolysis of the mixed .alpha.- and .beta.-epoxides IV and VI, formed by epoxidation of I, the tedious chromatographic sepn. to produce IV and VI can be avoided. The ready availability of the tetrasubstituted epoxides led to their inclusion in studies of BF3-catalyzed rearrangements. IV (1 g.) in 100 ml. anhyd. C6H6 treated 30 sec. with 1 ml. BF3-Et2O and dild. with Et2O, the washed soln. evapd. and chromatographed on 80 g. Al2O3, eluted with 8:1 ligroine-C6H6 and the eluate (333 mg.) crystd. from C5H12 and MeOH gave the 8(14), 13(17a)-diene (VII), m. 160-2.degree., [alpha]_D -62.degree. (c 1.17). Elution with 1:1 ligroine-C6H6 gave 300 mg. gum (VIII), [alpha]_D -53.degree. (C 1.33). Further elation with C6H6 gave 180 mg. hecogenin acetate, m. 250-2.degree. (MeOH), [alpha]_D -7.degree., and final elution with Et2O gave the fluorohydrin II (R : F) (IX), m. 176-7.degree. (C6H14), [alpha]_D -62.degree. (c 0.73). VIII (175 g.) treated with 0.5 ml. BzH in 10 ml. alc. contg. 60 mg. KOH 18 hrs. at 20.degree. and the product isolated with Et2O, chromatographed on Al2O3, and eluted with C6H6 gave 143 mg. 13-acetyl-C-nor compd. (X) benzylidene deriv., [alpha]_D -38.degree. (c 0.93). Elution with Et2O gave 29 mg. 3.beta.-hydroxy-C-nor-D-homo-17a ketone (XI), [alpha]_D -42.degree. (C 1.12). IX (100 mg.) and 100 mg. KOH heated under reflux 4 hrs. in 25 ml. 90% aq. alc. gave the 3.beta.-hydroxy-13.alpha.,17a.alpha.-oxide, acetylated to IV. IV (800 mg.) and 0.8 ml. BF3-Et2O kept 1 hr. in 80 ml. anhyd. Et2O gave 646 mg. IX. IX (140 mg.) and 0.16 ml. BF3-Et2O kept 22 min. in 16 ml. C6H6 gave material, lambda. 251 m.mu. (epsilon. 3200) contg. 14% diene VII. Crystn. from MeOH gave 20 mg. hecogenin acetate, and chromatography of the residues on Al2O3 gave a ketonic fraction consisting mainly of X and unreacted IX. VI (500 mg.) in 50 ml. dry C6H6 treated 3 min. with 0.5 ml. BF3-Et2O and isolation of the steroidal product gave 17a.beta.-hydroxy-17a.alpha.-methyl-.DELTA.8(14)-olefin (XII), m. 170-1.degree. (MeOH), [alpha]_D -94.degree. (c 1.03), deep yellow color with C(NO2)4, dehydrated with SOCl2-C5H5N to VII, thus supporting the trans-13.alpha.,17a.beta.-configuration of XII. The reaction between VI and BF3 in Et2O gave only unreacted VI and the fluorohydrin (XIII), m. 130-7.degree. (decompn.), [alpha]_D -50.degree.

L7 ANSWER 10 OF 37 CAPLUS COPYRIGHT 2002 ACS

AN 1965:91207 CAPLUS
 DN 62:91207
 ORF 62:16328g-h,16329a-g
 TI Jervine. XV. Hydrogenation of the 13,17a-double bond
 AU Wintersteiner, O.; Moore, M.
 CS Squibb Inst. Med. Res., New Brunswick, NJ
 SO Tetrahedron (1965), 21(4), 779-90
 DT Journal
 LA English
 CC 42 (Steroids)
 GI For diagram(s), see printed CA Issue.
 AB cf. CA 62, 9200f. N-Acetyltetrahydroisjervine (503 mg., CA 58, 2479f) in 5% KOH-MeOH refluxed (N atm.) 1 hr. and the H2O-washed product recrystd. from MeOH-EtOAc gave 364 mg. .alpha.,.beta.-unsatd. ketone (I, R = H) (II), m. 276-9.degree., [alpha]_D -12.7.degree. (c 0.883); triacetate (I, R = Ac) (III), m. 262-4.degree. (EtOAc-C6H14), [alpha]_D -27.4.degree. (c 0.948). II (149 mg.) in 15 ml. AcOH catalytically hydrogenated with 300 mg. prepaved PtO2 in 5 hrs. with 1.07 mola equivs. H and the filtered soln. evapd. the residue kept overnight in 50% aq. EtOH, and the cryst. deposit recrystd. from EtOAc gave 12 mg. II, converted to III for identification. The residue from the combined mother liquors acetylated and recrystd. from alc. and from EtOAc-C6H14 yielded 37 mg. impure C/D trans linked isomer (IV, R = Ac), m. 226-9.degree., [alpha]_D -8.6.degree. (c 1.059, 1:1 MeOH-tetrahydrofuran), showing mutarotation in this solvent contg. 2% KOH from [alpha]_D 12.0 (c 1.075) to -24.2.degree. in 23 hrs. IV contained 70% starting material present as III. Part of IV equilibrated in alk. soln. and the product crystd. from EtOAc gave pure N-acetyl deriv. (V, R = H) (VI), m. 268-70.degree., [alpha]_D -39.degree.. Isolation of VI and the characteristic shape of the mutarotation curve left no doubt as to the identity of the hydrogenation product as IV. Accordingly the side chain in the parent ketone II must be .beta.-oriented and trans addn. to the double bond occurred. The formation of IV as the kinetically favored product was explained by the predominance of stereoelectronic over purely steric control of proton addn. of C-13 in the re-ketonization of an enolic intermediate arising by 1,4-addn. of H to the enone system of II. The observation that the hydrogenation of jervine (VII, R = R' = H, .DELTA.13-17a) afforded tetrahydrojervine (CA 37, 4072f) by cis(.alpha.,.alpha.)-addn. was confirmed, and the product characterized as diacetyltetrahydrojervine, m. 214-17.degree.. O,N-Diacetyl jervine VII (R = R' = Ac, .DELTA.13-17a, 3.06 g.) in 300 ml. AcOH hydrogenated 22 hrs. with 1.54 g. prerduced Pt catalyst and the residue on evapn. of the filtered soln. taken up in EtOAc, dild. with C6H14 and the ppt. recrystd. from warm EtOAc, MeOH-EtOAc, and Me2CO, the product (168 mg., m. 240-4.degree.) chromatographed on Al2O3 and eluted in 4% Et2O-MeOH gave the 3,N-diacetate (VIII), m. 240-3.degree., [alpha]_D -27.8.degree. (c 1.148), isomeric with IV, V and the 17-epimeric dihydro deriv. (IX). VIII gave a triacetate (X), [alpha]_D 300 -23.3.degree.. Hydrolysis of VIII by boiling 30 min. in 5% KOH-MeOH gave the N-acetyl deriv. (XI), m. 220-1.degree. (EtOAc), [alpha]_D 310 -27.3.degree. (c 0.952). Acetylation of XI gave an amorphous product with ir spectrum identical with that of X. Mutarotation of VIII in 1:1 MeOH-tetrahydrofuran contg. 2% KOH gave initial [alpha]_D 300 -35.0.degree. shifting to -38.9.degree. in 5 hrs. (c 1.389). The mixt. yielded the N-acetyl deriv. (XI) and the mother liquor from VIII evapd. and the residue (2.5 g.) acetylated, chromatographed and the primary eluates rechromatographed gave almost pure triacetyltetrahydroisjervine (XIII), m. 170-2.degree., [alpha]_D 300 66.3.degree. (c 1.033). Further elution with 1:1 C6H6-Et2O gave IX triacetate, [alpha]_D 280 -14.7.degree. (CHCl3), showing mutarotation in alk. MeOH-tetrahydrofuran, hydrolyzed in 5% KOH-MeOH to the N-Ac. deriv.,

L7 ANSWER 10 OF 37 CAPLUS COPYRIGHT 2002 ACS (Continued)
 AN m. 235-9.degree., [.alpha.]25D -13.degree. (c 1.192). With
 DN 0,N-diacetyljervine, the primary event in hydrogenation was the
 OREF hydrogenolysis of the 17,23- ether linkage and the formation of a free
 TI 23-OH group. This may have been accompanied by deconjugation of the enone
 AU grouping leading to 3,N-diacetyltetrahydroisojervine, isolated as XIII, or
 CS followed by hydrogenation of the double bond and thus leading by trans
 SO (13.beta.,17a.alpha.)-addn. to the 3,N-diacetate of IX and to the
 DT configurationally as yet undefined new stereoisomer VIII. These results
 LA were discussed in terms of their dependence on the ease of protonation of
 CC the 17,23-ether O and the direction of polarization of the enone system
 AB before and after cleavage of the 17-O bond.

L7 ANSWER 12 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1965:82827 CAPLUS
 DN 62:82827
 OREF 62:14774c-h,14775a-b
 TI C-Nor-D-homosteroids and related alkaloids. III. C-9 Configuration of
 AU jervine and related alkaloids
 CS Masamune, Tadashi; Takasugi, Mitsuo; Mori, Yoichi
 SO Hokkaido Univ., Sapporo, Japan
 DT Tetrahedron Letters (1965), (9), 489-95
 LA Journal
 CC English
 GI 42 (Steroids)
 AB For diagram(s), see printed CA Issue.
 cf. CA 61, 702d, 8351d. It was shown that jervine (I, R' = O) (II) and
 veratrine (III, .delta.5) (IV) have the B/C trans configuration. III
 (no .delta.5), m. 191-3.degree., treated with (CH₂CO)₂NCI, the N-chloro
 deriv. treated with NaOMe and subsequently hydrolyzed gave an aldehyde,
 degraded with BuNO₂ and BuONa to an oxime, m. 228-321 hydrolyzed to give a
 ketone (V), C₂₁H₂₈O₂, m. 1667, 1597 cm.⁻¹, .lambda.
 258 m.mu. (.epsilon.15, 1000), N.M.R. .tau. 7.42, 7.56, 9.05, identical
 with the ketone prepd. from hecogenin by Mitsuhashi and Shibata (CA 61,
 13374b). Birch redn. of IV with Li in EtNH₂ in the presence of Me₂CHOH
 yielded 33% main product (VI), m. 182-4.degree., .lambda. 210 m.mu.
 (.epsilon.16, 1000); triacetyl deriv. m. 144-6.degree., .tau.4.58, 8.47.
 Catalytic hydrogenation of VI in AcOH over prerduced PtO₂ gave the
 compds. VII, m. 174-6.degree. Rf 0.41, and VIII, m. 181-3.degree., Rf 0.58
 (CA 61, 8351d). Treatment of 11-deoxojervine (IX) with Li and EtNH₂
 yielded 2 isomeric substances X, C₂₇H₄₃NO₂, m. 157-9.degree., Rf 0.78,
 .nu. 3300, 1715, 1063, 877, 806 cm.⁻¹, and XI, m. 190-2.degree.,
 [.alpha.]D -53.6.degree. (95% alc.), Rf 0.56, v 3400, 1063, 883, 806 cm.⁻¹
 Hydrogenation of X gave a good yield of the 5,6-dihydro deriv. (XII),
 C₂₇H₄₅NO₂, m. 155-7.degree., [.alpha.]D -59.4.degree., .nu. 3300, 1719,
 1032, 878 cm.⁻¹, also produced in good yield by direct hydrogenation of
 IX. On acetylation XII and XI gave the corresponding triacetyl derivs.,
 m. 157-9.degree. .tau. 4.93, 5.17, 5.35, 8.34, 9.28, and m.
 188-90.degree., [.alpha.]D -10.2.degree. .tau. 4.61, 8.47, 9.02. The
 N.M.R. spectra indicated the presence of a C-18 Me group and suggested the
 configuration of the C/D ring linkage. Hydrogenation of XI gave mainly
 VII, m. 172-4.degree. Rf 0.43, .nu. 3300, 1041, 855 cm.⁻¹, .tau. 8.35,
 9.25. Oxidn. of diacetyljervine-11.beta.-ol with CrO₃-C₂H₅SO₃H gave
 diacetyljervine, indicating that jervine-11.beta.-ol (XIII) has the same
 configuration at C-9 as II. Birch redn. of XIII gave 5% triol (XIV) and
 50% diol (XV). XIV, m. 217-18.degree., Rf 0.15, was also obtained by
 redn. of 8,9-dihydroisojervine with LiAlH₄. The diol XV, C₂₇H₄₃NO₂, m.
 198-9.degree., [.alpha.]D -64.9.degree., Rf 0.48, .nu. 3400, 1064, 885,
 806 cm.⁻¹, gave a triacetyl deriv., m. 189-90.degree., [.alpha.]D
 -12.3.degree., .tau. 4.58, 8.47, 9.02, showing cleavage of the ether bond
 and removal of the 11-OH group. Hydrogenation of XV gave 2 cryst.
 compds., XIII C₂₇H₄₅NO₂, m. 184-6.degree., Rf 0.50, v 3400, 3300, 1041,
 885 cm.⁻¹, and VIII, C₂₇H₄₇NO₂, m. 180-2.degree., Rf 0.59, v 3300, 1715,
 1039, 878 cm.⁻¹ XVI gave a triacetyl deriv., m. 201-4.degree., showing
 almost the same N.M.R. spectrum as that of the corresponding deriv. of XV.
 The spectrum of the triacetyl deriv. of VIII exhibited no sharp absorption
 near .tau. 8.4, suggesting satn. of the C-12, C-13 double bond. The above
 transformations involved no reaction affecting the C-9 configuration and
 established the B/C configuration of II, 11-deoxojervine, and IV.

L7 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1965:91206 CAPLUS
 DN 62:91206
 OREF 62:16328d-g
 TI Nitrogen-containing steroids. X. The conversion of halohydrins to
 AU aziridines and oxazolines
 CS Ponsold, Kurt; Groh, Helmut
 SO Univ. Jena, Germany
 DT Chem. Ber. (1965), 98(4), 1009-12
 LA Journal
 CC German
 AB 42 (Steroids)
 cf. CA 62, 10476e. 2.alpha.-Bromo-3.alpha.-cholestanol (I) (3.0 g.) in 60
 cc. C₅H₅SN treated 48 hrs. at 0.degree. with 2.0 cc. MeSO₂Cl yielded 3.1 g.
 methanesulfonate (II) of I, leaflets, m. 232-3.degree. (CHCl₃-Me₂CO),
 [.alpha.]20D 52.degree. (c 2, CHCl₃). II (2.5 g.) in 150 cc. Me₂SO
 stirred 4 hrs. at 80.degree. with 7.0 g. NaN₃ gave 1.95 g.
 2.alpha.-bromo-3.beta.-azidocholestanol (III), m. 84.degree. (MeOH),
 [.alpha.]20D 10.degree. (c 2, CHCl₃). III (2.0 g.) in 16 cc. C₆H₆ and 1.1
 g. Ph₃P refluxed about 0.5 hr. and evapd., and the crude
 triphenylphosphinimine dissolved in 15 cc. refluxing AcOH and refluxed 1
 hr. with 5 cc. 48% HBr yielded 0.96 g. 2.alpha.-bromo-3.beta.-
 aminocholestanol-HBr (IV.HBr), m. 285.degree. (EtOH). IV.HBr (0.5 g.) in
 50 cc. boiling EtOH with 0.5 g. KOH in a little EtOH yielded 0.25 g. IV,
 m. 116.degree. (MeOH). III (3.0 g.) in 100 cc. AcOEt hydrogenated 2 hrs.
 at room temp. over 0.4 g. PtO₂ yielded 2.5 g. IV, m. 112-14.degree.
 (MeOH), [.alpha.]20D 5.degree. (c 1, C₅H₅SN). IV (0.90 g.), 1 g. KOH, and
 10 cc. MeOCH₂CH₂OH refluxed 20 min. yielded 0.55 g. 2.beta.,3.beta.-
 iminocholestanol (V), m. 104-5.degree. (0.20 g.) in 2 cc. C₅H₅SN treated
 1 hr. at room temp. with 2 cc. Ac₂O yielded 0.18 g. N-Ac deriv. of V, m.
 134-5.degree. (Me₂CO), [.alpha.]20D 37.degree. (c 1, CHCl₃). IV (0.5 g.),
 5 cc. C₅H₅SN, and 5 cc. Ac₂O yielded overnight at room temp. 0.45 g. N-Ac
 deriv. (VI) of IV, needles, m. 199.degree. (decompn.) (Et₂O), [.alpha.]25D
 -9.degree. (c 1, CHCl₃). VI (0.50 g.), 1 g. KOH, and 10 cc. MeOCH₂CH₂OH
 refluxed 15 min. yielded 0.34 g. 2'-methyloxazolino[5',4',2',3']cholestanol
 (VII), needles, m. 89.degree. (Me₂CO), [.alpha.]25D 52.degree. (c 1,
 CHCl₃). VII (0.1 g.) in refluxing Et₂O with picric acid in Et₂O gave 0.11
 g. picrate, needles, m. 204-5.degree. (Me₂CO), [.alpha.]20D -30.degree. (c
 1, CHCl₃). The reaction of the diaxial 2.beta.-bromocholestan-3.alpha.-ol
 methanesulfonate with NaN₃ yielded not the expected diaxial haloazide but
 rather an unsatd. azide.

L7 ANSWER 13 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1965:82826 CAPLUS
 DN 62:82826
 OREF 62:14773h,14774a-c
 TI Steroids in the adsorbed state. I. Adsorption of certain 5.alpha.- and
 5.beta.-cholanic and etianic acid derivatives on activated alumina
 AU Hodosan, Francis; Pop-Gocan, Alexandra
 CS Acad. R.P.R., Cluj
 SO Studii Cercetari Chim. Bucharest (1964), 13(8-9), 559-66
 DT Journal
 LA Romanian
 CC 42 (Steroids)
 AB Steroids of medium and low polarity of the 5.alpha.- and 5.beta.-cholane
 series possessing functional groups which can participate in substitution,
 elimination, hydrolysis, redn., and oxidn. reactions, were adsorbed on a
 thin layer of Al₂O₃ and subjected to the action of several reagents. The
 following were screened: methyl 3.alpha.-acetoxy-, methyl-3.beta.-acetoxy-
 , methyl 6.alpha.-acetoxy-, methyl 12.alpha.-acetoxy-, methyl
 3.alpha.-6.alpha.-diacetoxy-, methyl 3.alpha.-12.alpha.-diacetoxy-, methyl
 3.alpha.-tosyloxy-, methyl 6.alpha.-tosyloxy-, methyl 12.alpha.-tosyloxy-,
 methyl 3.alpha.-6.alpha.-ditosyloxy-, methyl-3-oxo-, methyl 6-oxo-, methyl
 12-oxo-, methyl 3,6-dioxo-, methyl 3,12-dioxo-5.alpha.- and
 -----5.beta.-cholananol, resp., and also methyl 3.beta.-acetoxy-
 5.alpha.- and -5.beta.-etianates. Plots of R_m values of the
 monosubstituted methyl 5.beta.-cholananol against the position of the
 substituents, showed that the substituents in the 3.alpha. and 6.alpha.
 positions affected the adsorptivity as follows: O > OTs > OAc > CO₂H,
 independent of the adsorbent activity, in contrast with those at C-12,
 which show some inversion. The oscillation of R_m values of 12.alpha.-
 substituted compds. around those of 3.alpha. and 6.alpha. derivs. favored
 the conception that the migration of a substance on the adsorbent surface
 is detd. by a rel. large no. of antagonistic effects. The
 6.alpha.-substituted compds. were more strongly adsorbed than the
 corresponding 3.alpha. compds. The skeleton-adsorbent-interaction effect
 proposed as an explanation was illustrated by means of the R_m values of
 the 3.alpha.- and 3.beta.-substituted methyl 5.beta.-cholananol. Also
 considered were the homology effect, and the steric effect which acted in
 opposition to the former two effects.

L7 ANSWER 14 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:82825 CAPLUS

DN 62:82825

OREF 62:14773h,14774a-c

TI Steroids in the adsorbed state. I. Adsorption of certain 5.alpha.- and 5.beta.-cholanic and etianic acid derivatives on activated alumina

AU Hodosan, Francisc; Pop-Gocan, Alexandra

CS Acad. R.P.R., Cluj

SO Rev. Roumaine Chim. (1964), 9(8-9), 523-30

DT Journal

LA English

CC 42 (Steroids)

AB Steroids of medium and low polarity of the 5.alpha.- and 5.beta.-cholane series possessing functional groups which can participate in substitution, elimination, hydrolysis, redn., and oxidn. reactions, were adsorbed on a thin layer of Al₂O₃ and subjected to the action of several reagents. The following were screened: methyl 3.alpha.-acetoxo-, methyl-3.beta.-acetoxo-, methyl 6.alpha.-acetoxo-, methyl 12.alpha.-acetoxo-, methyl 3.alpha.,6.alpha.-diacetoxo-, methyl 3.alpha.,12.alpha.-diacetoxo-, methyl 3.alpha.-tosyloxy-, methyl 6.alpha.-tosyloxy-, methyl 12.alpha.-tosyloxy-, methyl 3.alpha.,6.alpha.-ditosyloxy-, methyl-3-oxo-, methyl 6-oxo-, methyl 12-oxo-, methyl 3,6-dioxo-, methyl 3,12-dioxo-5.alpha.- and -----5.beta.-cholanates, resp., and also methyl 3.beta.-acetoxo-5.alpha.- and -5.beta.-etianates. Plots of R_m values of the monosubstituted methyl 5.beta.-cholanates against the position of the substituents, showed that the substituents in the 3.alpha. and 6.alpha. positions affected the adsorptivity as follows: O > OTs > OAc > CO₂Me, independent of the adsorbent activity, in contrast with those at C-12, which show some inversion. The oscillation of R_m values of 12.alpha. substituted compds. around those of 3.alpha. and 6.alpha. derivs. favored the conception that the migration of a substance on the adsorbent surface is detd. by a rel. large no. of antagonistic effects. The 6.alpha.-substituted compds. were more strongly absorbed than the corresponding 3.alpha. compds. The skeleton-adsorbent-interaction effect proposed as an explanation was illustrated by means of the R_m values of the 3.alpha.- and 3.beta.-substituted methyl 5.beta.-cholanates. Also considered were the homology effect, and the steric effect which acted in opposition to the former two effects.

L7 ANSWER 15 OF 37 CAPLUS COPYRIGHT 2002 ACS

AN 1965:720 CAPLUS

DN 62:720

OREF 62:110d-e

TI Mass-spectrometric study of carbohydrates: methyl ethers of disaccharides

AU Chizhov, O. S.; Polyakova, L. A.; Kochetkov, N. K.

SO Dokl. Akad. Nauk SSSR (1964), 158(3), 685-8

DT Journal

LA Russian

CC 9 (Electric and Magnetic Phenomena)

AB Mass spectra were obtained of .alpha.-Me hepta-O-methyl-gentiobioside (I), .alpha.,.beta.-Me hepta-O-methylmelibioside (II), .alpha.,.beta.-Me hepta-O-methylcellobioside (III), .alpha.,.beta.-Me hepta-O-methylmaltoside (IV), .alpha.,.beta.-Me hepta-O-methylraffinose (V), and .alpha.-Me hepta-O-methylsophorose (VI). The more conspicuous differences between the mass spectra arise from the different positions of the O bridge, which is 1 .fwdarw. 6 in I and II, 1 .fwdarw. 4 in III, IV, and V, and 1 .fwdarw. 2 in VI. Peaks at m/e = 380 and 305 are observed in the spectra of III, IV, V, and VI only, m/e = 380 being ascribed to loss of C atoms 5 and 6 together as methoxymethanol from ring B, and m/e = 305 to the further loss of (MeO)ZCH₂bul. A peak at m/e = 161 is much stronger in III, IV, and V than in VI, and is attributed to loss of the ring A radical from the m/e = 380 fragment. Peaks at m/e = 279 and 353 are thought to be analogous to the peaks at m/e = 75 and 149 in methylated glucose; m/e = 279 probably arises from cleavage in ring A, and m/e = 353, which occurs only in I and II, from ring B cleavage.

L7 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2002 ACS

AN 1965:719 CAPLUS

DN 62:719

OREF 62:110b-d

TI Highly sensitive photoresistors and photocells of roasted CdS and some of their reversible aging processes

AU Kynev, St.; Stoyanov, V.; Shekerdzhiski, V.

CS Phys. Inst., Sofia, Bulg.

SO Acta Phys. Polon. (1964), 25(3), 313-21

DT Journal

LA Russian

CC 9 (Electric and Magnetic Phenomena)

AB A method of simply and quickly prepn. CdS tablets suitable for the production of photoresistors makes use of any CdS or CdS contg. CdSO₄ that can be had from Soviet industry. The prepn. involves compression of the CdS power at 100 kg./sq. cm. followed by heating in an Ar atm. at 850-900.degree. for 1/2 hr. The photosensitivity of the material is increased by Cu addn. The high-resistance photosensitive sinter obtained is used to prep. by known methods photoresistors having improved mech. stability. On exposure to light these photoresistances age, with photocurrents decreasing 5-30% for the first 100-200 working hrs., and no change thereafter (measured at 2000 hrs.). Heating an already aged photoresistance some 10 sec. restores it to its initial state, and it can be repeated 7-8 times. The theory of the reversible aging is discussed. The photoresistors capable of prepn. by methods described can be used in automatic control and measuring devices and as a result of their feeding and intensifying ability they can be used as photomultipliers. Some properties of the photoresistors are given.

L7 ANSWER 17 OF 37 CAPLUS COPYRIGHT 2002 ACS

AN 1964:404373 CAPLUS

DN 61:4373

OREF 61:702d-g

TI C-Nor-D-homosteroids and related alkaloids. II. A new alkaloid from

Veratrum species, 11-deoxojervine

AU Masamune, Tadashi; Mori, Yoichi; Takasugi, Mitsuo; Mural, Akira

CS Hokkaido Univ., Sapporo, Japan

SO Tetrahedron Letters (1964), (15-16), 913-17

DT Journal

LA Unavailable

CC 42 (Steroids)

GI For diagram(s), see printed CA issue.

AB cf. CA 58, 11437c. The ground roots of V. album var grandiflorum gave 0.08% veratramine and 0.3% new alkaloid (Ia) (R = H₂, R₁ = H) (I), but no jervine (Ia) (R = O, R₁ = H) (II). I m. 237-8.degree.. [.alpha.]D -33.2.degree. (EtOH); O,N-diacetate m. 163-4.degree. and 195-7.degree.. [.alpha.]D 1.1.degree.. I was recovered on redn. with LiAlH₄ or Li in liquid NH₃. Catalytic redn. of jervine-11.beta.ol (Ia) (R = .beta.-OH, H, R₁ = H) (III) in HOAc in the presence of Pt gave the 5,6-dihydro deriv. of Ia (R = .beta.-OH, H, R₁ = Ac) (IV), m. 124-7.degree. and 189-91.degree.; O,O,N-triacetate m. 184-6.degree.. Birch redn. of III in MeOH gave V, m. 148-50.degree.. On refluxing with HCl in MeOH, III gave 3% veratramine. The CO group of II did not form an oxime. Clemmensen redn. of 12,13-dihydrojervine was unsuccessful. Wolff-Kishner redn. of II gave VI, m. 211-13.degree., [.alpha.]D +3.5.degree., and m. 236-8.degree.. VI gave an O,O,N-tri-acetate, m. 116-18.degree., [.alpha.], 46.degree.. Ultraviolet, infrared, and nuclear magnetic resonance data were used to confirm the structure of the compds.

L7 ANSWER 18 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1964:91192 CAPLUS
 DN 60:91192
 OREF 60:15947c-e
 TI A polymer-homologous series of methyl .beta.-D-glycosides from cellulose
 AU Wolfrom, M. L.; Haq, S.
 CS Ohio State Univ., Columbus
 SO Tappi (1964), 47(4), 183-5
 DT Journal
 LA Unavailable
 CC 43 (Carbohydrates)
 AB cf. CA 51, 1601h. Polymer homologs of Me .beta.-D-glycosides with a degree of polymerization of 2, 3, 4, and 5 from cellulose were treated with Ac2O contg. 40% HBr 1-1.5 hrs. at 25.degree. and gave the corresponding bromides (I) in 56% yield, m. 182-3.degree.; 78%, m. 183-5.degree.; 72%, amorphous; 78% amorphous, resp. I were shaken in a 1:1 mixt. of CHCl3-MeOH with Drierite and Ag2O with the exclusion of light to give the following O-acetyl oligosaccharides (II): Me hepta-O-acetyl-.beta.-cellobioside (III), 68%, m. 186-7.degree., [alpha.]20D -26.9.degree. (c 5.8, all in CHCl3); Me deca-O-acetyl-.beta.-cellobioside, 72%, m. 198-9.degree., [alpha.]20D -25.9.degree. (c 4.7); Me trideca-O-acetyl-.beta.-cellobioside, 49%, m. 215-16.degree., [alpha.]20D -25.2.degree. (c 4.5); Me undeca-O-acetyl-.beta.-cellobioside, 65%, m. 224-6.degree., [alpha.]20D -24.2.degree. (c 5.6). II were refluxed 6 hrs. in MeOH with BUNH2 to give Me .beta.-cellobioside (IV), 84%, m. 192-3.degree., [alpha.]20D -19.7.degree. (c 3.3, all in H2O); Me .beta.-cellobioside, 93%, m. 240-2.degree., [alpha.]20D -13.7.degree. (c 3.1); Me .beta.-cellobioside, 94%, m. 251-3.degree. (decompn.), [alpha.]20D -10.degree. (c 1.4); Me .beta.-cellobioside, 94.5%, m. 255-8.degree. (decompn.), [alpha.]20D -8.1.degree. (c 1.4). The x-ray powder diffraction bands and the rotatory dispersion of III and IV were detd. The optical rotatory powers of both series followed the Freudenberg relationship.

L7 ANSWER 20 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1964:91113 CAPLUS
 DN 60:91113
 OREF 60:15944d-g
 TI The Veratrum alkaloids
 AU Poethke, W.; Kuntze, M.; Kerstan, W.
 CS Friedrich-Schiller Univ., Jena, Germany
 SO Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 91-9
 DT Journal
 LA Unavailable
 CC 42 (Steroids)
 AB Esters of rubijervine, so far not found in the Veratrum species, were prepd., and the amorphous alkaloids of Veratrum album were chromatographed to give rubijervine (I), isorubijervine (II), jervine (III), and 3 unknown alkalamines. I and III were each treated with the desired acid chloride in pyridine; warming of I must be avoided. Thus prepd. were I diacetate (IV), m. 161-3.degree. (decompn.) (alc.); I dipropionate, m. 217-18.degree. (decompn.) (acetone); I bis(dl-.alpha.-methylbutyrate) (V), m. 195-6.degree. (decompn.) (acetone); dipropionyljervine, m. 121.degree. (decompn.) (dil. MeOH); and bis(dl-.alpha.-methylbutyryl)jervine, m. 174-6.degree. (decompn.) (dil. MeOH). I, IV, and esp. V depressed the blood pressure of cats at doses of 0.03 mg./kg. Alk. hydrolysis of the amorphous alkaloids obtained from Veratrum album gave besides germinine another amorphous fraction, which was paper-chromatographed; the following solvent systems gave partial seps., showing the presence of I, II, III, and 2 other alkalamines designated A and C: 90:10 CHCl3-dioxane; 75:25 CHCl3-MeCOEt, 90:10 or 80:20 CHCl3-C6H6, and 25:75 CH2:CHCl-EtOAc, all mixts. being satd. with HCONH2. Germinine, isogerminine, protoverine, zygadenine, and an alkaloid designated Alkamine B did not travel with any of these solvent systems but could be sepd. by means of 40:50:10 BuOH-H2O-AcOH. Crystn. of the hydrolyzed amorphous fraction from acetone and chromatography on an acidic Al2O3 column with CHCl3 as eluent to which increasing quantities of EtOH were added yielded a mixt. of I and II (sepd. by fractional crystn. from EtOH into I, m. 23942.degree., and II, needles m. 216-18.degree. and prisms m. 237-8.degree.), III (m. 241-3.degree.), amorphous A, and cryst. B, m. 259-62.degree. (acetone). Chromatography on HCONH2-treated silica gel with CHCl3 + 1% EtOH as eluent gave good seps. and yielded cryst. A, C27H43O4N, m. 115-18.degree., crystd. by slow evapn. of its acetone-ether soln., as well as C, m. 215-17.degree. (acetone-ether).

L7 ANSWER 19 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1964:91191 CAPLUS
 DN 60:91191
 OREF 60:15947b-c
 TI The applicability of Klyne's rule to the calculation of molecular rotation of alkaloid glycosides and other carbohydrates
 AU Stanek, J.
 CS Karlova Univ., Prague
 SO Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 117-30
 DT Journal
 LA Unavailable
 CC 43 (Carbohydrates)
 AB Klyne's rule for the calcn. of mol. rotation was successfully applied to the following substances: the Veratrum alkaloid glycosides veratrosine, isorubijervosine, pseudojervine; the nonreducing oligosaccharides gentianose, raffinose, melezitose, their undecaacetyl derivs., and undecamethylmelezitose; Me solatrioside, Me chacotrioside, and Me lycotetraoside. Values calcd. for the Solanum alkaloid monosides did not agree well with exptl. values. 95 references.

L7 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1964:91112 CAPLUS
 DN 60:91112
 OREF 60:15944c-d
 TI Degradation of solasodine
 AU Magyar, G.
 CS Forschungsinst. Pharm. Ind., Budapest, Hung.
 SO Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 225-7
 DT Journal
 LA Unavailable
 CC 42 (Steroids)
 AB Acetylation of solasodine (I) with Ac2O in the presence of CSH5W, quinoline, collidine, NET3, alkali carbonates, alk. earth carbonates, Na3PO4, Na, Mg, Fe, and some ion exchange resins was investigated. Optimum results were obtained with NET3 in the presence of an inert solvent as PhMe. The product was O,N-diacetylsolasodine (II). The conversion of II into the pseudoacetamido deriv. followed by oxidn. was effected by known methods. Subsequent pyrolytic cleavage of the 16-acyloxy side chain gave an overall yield of 58% 5,16-pregnadien-3B-ol-20-one acetate. As in the degradation of I, pregna-5,16-dien-3.beta.-ol-20-one propionate and butyrate were obtained from I and 5.beta.-pregn16-en-3.beta.-ol-20-one acetate and propionate from tomatidine.

L7 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1963:66694 CAPLUS
 DN 58:66694
 OREF 58:11437g-g
 TI Structure of isojervine
 AU Masamune, Tadashi; Takasugi, Mitsuo; Suzuki, Hiroshi; Kawahara, Shozo;
 Gonda, Masatoshi; Irie, Toshi
 CS Hokkaido Univ., Sapporo
 SO Bull. Chem. Soc. Japan (1962), 35, 1749-50
 DT Journal
 LA English
 CC Unavailable
 AB 42 (Steroids)
 GI For diagram(s), see printed CA Issue.
 The structure I is found to be consonant with all chem. and spectral data for isojervine, C₂₇H₃₉O₃N, which is a secondary base with two acylable hydroxyl groups and one .alpha.,.beta.-unsatd. oxo group, p 1684, 1630, and 1063 cm.⁻¹, .lambda. 330 m.mu. (.epsilon. 250), 252 m.mu. (infection), .epsilon. 2900, 211 m.mu. (.epsilon. 9000). Redn. of I with Li and MeOH in NH₃ at -70.degree. afforded .alpha.-dihydrojervinol. Oppenauer oxidn. of I with cyclohexanone and Al isopropoxide gave isojervone, m. 112-14.degree. (.alpha.)d 140.degree. (EtOH), 1682, 1642, and 1620 cm.⁻¹, .lambda. 234 m.mu. (.epsilon. 22,000). Hydrogenation of I over Pt in HOAc gave dihydroisojervine (II), m. 153-5.degree. and 171.5-2.5.degree., v 1679, 1625, and 1040 cm.⁻¹, .lambda. 238 m.mu. (.epsilon. 9400). Oppenauer oxidn. of II produced dihydroisojervone, m. 108-10.degree., v 1712, 1687, and 1629 cm.⁻¹, .lambda. 238 m.mu. (.epsilon. 9900). Hydride redn. of I yielded isojervinol, m. 210-11.degree., .lambda. 212 m.mu. (.epsilon. 9510). The spectral data suggested a double bond at C8-C9. Birch redn. of I gave .alpha.-tetrahydroisojervine (III), m. 147-9.degree., 1731 cm.⁻¹, and .beta.-tetrahydroisojervine (IV), m. 138-42.degree. (CHCl₃ addn. compd.); v 1741 cm.⁻¹. Neither the triacetate of III, m. 179-82.degree., nor the triacetate of IV, m. 168-8.5.degree. was identical with 22,27-imino-17(20)-jervene-3,23-diol-11-one triacetate. Treatment of II with N tert-BuOK in refluxing tert-BuOH under N 1 hr. yielded V, m. 142-4.degree., v 1670, 1621, and 1036 cm.⁻¹, CHCl₃, 1678 and 1630 cm.⁻¹, .lambda. 239 m.mu. (.epsilon. 8600). V was a weak tertiary base; the pK_a of V, I, and II were 6.12, 6.92, and 7.08 in 50% EtOH. Acetylation of V with Ac₂O and C₅H₅N at 100.degree. 3 hrs. gave a O,O-diacetate, p (CHCl₃) 1725, 1685, and 1632 cm.⁻¹, pK_a 4.47. Similar reactions, involving migration of 13(17) double bond to .alpha.,.beta.-position of the carbonyl group followed by cyclization, were observed with III and IV.

L7 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1962:7883 CAPLUS
 DN 56:7883
 OREF 56:1525h-1
 TI The alkaloids of the above-ground organs of Veratrum album. Composition of the alkaloids
 AU Jaspersen-Schib, R.; Flueck, H.
 CS Pharm. Inst., Zuerich, Switz.
 SO Pharm. Acta Helv. (1961), 36, 461-71
 DT Journal
 LA English
 CC 39 (Pharmaceuticals)
 AB The alkaloids are sepd. by partition chromatography by using kieselguhr. The properties of the pure alkaloids, with respect to paper chromatography, were studied, and their identification in the alkaloidal exts. of V. album was then examd. by the same procedure. The presence of geranine, geraldine, neogermabudine, veratroylzygadenine, and protoveratrine A and B in 1 or more of the samples was demonstrated. In all the exts. examd., 1 unknown alkaloid (alkaloid V) was found. The most toxic exts. contained ester alkaloids. Expts. with isolated pieces of the first stomach as well as the uterus of the cow, treated with powdered leaves and stolns. of five exts., showed a decrease of the contractions. A sample contg. chiefly ester alkaloids increased the contractions.

L7 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1963:66693 CAPLUS
 DN 58:66693
 OREF 58:11436g-h,11437a-c
 TI Epimeric 2-bromo derivatives of 4,4-dimethylcholestan-3-one
 AU Malunowicz, J.
 CS Coll. Agr., Wroclaw, Pol.
 SO Bull. Acad. Polon. Sci. Ser. Sci. Chim. (1962), 10, 311-17
 DT Journal
 LA English
 CC 42 (Steroids)
 AB Bromination of 3.39 g. 4,4-dimethylcholestan-3-one in HOAc and HBr by Br in HOAc at room temp., followed by NaBH₄ redn. of the oily product in C₆H₅-MeOH yielded the bromohydrin, which was acetylated with Ac₂O in C₅H₅N at room temp. and gave 2.8 g. 2.alpha.-bromo-3.beta.-acetoxo-4,4-dimethylcholestan-3-one (I), m. 169-70.degree. (EtOAc-MeOH), [.alpha.]D -17.degree.. I refluxed 24 hrs. with 5% alc. KOH yielded 2.beta.,3.beta.-epoxy-4,4-dimethylcholestan-3-one (II), m. 97-8.degree. (Me₂CO-MeOH), [.alpha.]D 531 which was reduced by LiAlH₄ in Et₂O to yield the known 4,4-dimethylcholestan-3.beta.-ol. Treatment of 600 mg. I with Zn-HOAc under reflux 1 hr. gave 300 mg. 4,4-dimethylcholestan-2-one, m. 93-4.degree. (Me₂CO), [.alpha.]D 29.degree., which was treated with Br₂OOH in CHCl₃ at 0.degree. 48 hrs. to give 80% 2.alpha.,3.alpha.-epoxy-4,4-dimethylcholestan-3-one (III), m. 84-5.degree. (EtOAc-MeOH), [.alpha.]D 33.degree. which with LiAlH₄ redn. yielded the known 4,4-dimethylcholestan-3.alpha.-ol. Shaking 500 mg. II with 10 ml. HBr in CHCl₃ 15 min. yielded 380 mg. 2.beta.-bromo-4,4-dimethylcholestan-3.alpha.-ol (III), m. 107-8.degree. (EtOAc-MeOH), [.alpha.]D 60.degree., which with Ac₂O-C₅H₅N at room temp. yielded the 3.alpha.-acetate, which, refluxed with alc. KOH 24 hrs. yielded II. Oxidn. of 500 mg. III in C₆H₅HOAc with 4.5 ml. Kiliani's mixt. at room temp. 30 min. yielded 260 mg. 2.beta.-bromo-4,4-dimethylcholestan-3-one (IV), m. 111-12.degree. (EtOAc-MeOH), [.alpha.]D 114.degree., .gamma. 1731 cm.⁻¹, indicative of an equatorial Br. That the Br is .beta.-oriented is shown by (1) its high specific rotation; (2) the epimerization of IV with HBr in HOAc at 27.degree. 12 hrs. to yield the 2.alpha.-bromo-4,4-dimethylcholestan-3-one (V), m. 73-5.degree. (EtOAc-EtOH), [.alpha.]D 12.degree., y 1734 cm.⁻¹; (3) NaBH₄ redn. of IV to yield 2.beta.-bromo-4,4-dimethylcholestan-3.beta.-ol, m. 155-6.degree. (EtOH), [.alpha.]D 33.degree., which with CrO₃ yielded IV, and when refluxed with alc. KOH gave 4,4-dimethylcholestan-3-one. Ring A must therefore be in the boat form. Redn. of V with NaBH₄, followed by acetylation with Ac₂O-C₅H₅N at room temp. yielded I. Thus the stable bromo ketone is the equatorial 2.alpha.-bromo ketone with ring A in the chair conformation.

L7 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1960:91847 CAPLUS
 DN 54:91847
 OREF 54:17443g-1,17444a-e
 TI The general importance of the reaction of alkaloids of the secondary amine type with formaldehyde
 AU Auerhoff, H.; Moll, F.
 CS Tech. Hochschule, Braunschweig, Germany
 SO Arch. Pharm. (1960), 293, 132-41
 DT Journal
 LA Unavailable
 CC 10H (Organic Chemistry: Alkaloids)
 AB The reaction of alkaloids of the secondary amine types with formaldehyde was investigated and it was assumed that this reaction was important in the biosynthesis of alkaloids. The nucleophilic strength of the alkaloids was detd. by the method of Brady and Cropper (CA 45, 8971e) with 2,4-(OH)₂NC₆H₃Cl(I). Reaction velocity const. of the reaction with I (k₂ .times. 10⁻⁴) and const. of the alk. disocn. KB were detd. Cephaline (II) (0.254 g.) treated in 50 ml. abs. Et₂O with 0.10 ml. 35% HCHO 4 hrs. at room temp. and the solvent evapd., yielded 0.279 g. N-(hydroxymethyl)cephaline (III), m. 138-142.degree., [.alpha.]D -20.degree. (c 2, CHCl₃), Rf (Partridge mixt.) 0.53. The paper chromatography showed uniformity of III, II and 35% HCHO reacted in NaOH soln. to give a mixt. of several products: dicephalinomethane was not obtained. Coniine (IV) (contg. small amts. of .gamma.-coniine) (0.304 g.) refluxed in 30 ml. Et₂O with 0.2 ml. 35% HCHO and 0.5 g. K₂CO₃ 30 min. yielded after evapn. of the solvent 0.270 g. N-(hydroxymethyl)coniine(V), yellow oil, n_D20 1.4779, [.alpha.]D 55.degree. (c 5.5). IV (0.272 g.) was heated with 0.032 g. paraformaldehyde and 5 mg. K₂CO₃ (VI) in a sealed tube 20 min. with shaking on a water bath; filtration and evapn. of Et₂O yielded 0.185 g. diconiinomethane, oil, n_D20 1.4852, [.alpha.]D 49.degree., Rf 0.74. Conhydrine (VII) (0.5 g.) refluxed in 30 ml. Et₂O with 0.60 ml. 35% HCHO and 1 g. VI 30 min., and the soln. evapd. after filtration yielded 0.564 g. N-(hydroxymethyl)conhydrine, yellow oil, n_D20 1.4672, [.alpha.]D 102.degree. (CHCl₃), [.alpha.]D 46.degree. (alc.), [.alpha.]D 106.degree. (alc. after 3 days), Rf 0.64. The prepn. of diconhydrinomethane failed. Cytisine (VIII) (0.159 g.) treated 4 hrs. at room temp. with 0.075 g. 35% HCHO yielded after filtration and evapn. 0.173 g. N-(hydroxymethyl)cytisine m. 110-14.degree.. VIII (0.30 g.) treated at room temp. in 3 ml. abs. alc. with 0.147 g. 35% HCHO and 0.2 g. Ca(OH)₂ 12 hrs., 30 ml. Et₂O and 0.1 g. VI added, and the mixt. filtered, yielded dicytisinomethane, m. 220-1.degree.. Jervine (50 mg.) in 80 ml. abs. Et₂O and 0.10 ml. 35% HCHO treated 15 min. at 40.degree. yielded 54 mg. N-(hydroxymethyl)jervine, m. 168-70.degree. (decompn.). The prepn. of hydroxymethyl compds. of bornylisobornylamine and diisobornylamine failed. 32 times. 10-4 and KB, resp., were detd. for the following compds.: piperidine, 175, 1.6 .times. 10⁻³(25.degree.); morpholine, 44, - NHEt₂, 2.2, 9.6 .times. 10⁻³(25.degree.); cephaline, 2.9, -; emetine, 1.5, 2.3 .times. 10⁻⁷ (secondary N) (15.degree.) and 1.7 .times. 10⁻⁶ (tertiary N); coniine, 0.12, 1.3 .times. 10⁻³(25.degree.); conhydrine, 0.06; 2 .times. 10⁻⁴(18.degree.); jervine, about 0.04, -; diisobornylamine, about 0.002, -; theophylline, about 0.004, 1.9 .times. 10⁻⁴(25.degree.); theobromine, about 0.004, 1.3 .times. 10⁻⁴(18.degree.); yohimbine, about 0.002, 10⁻¹¹ (secondary N) (23.degree.), and 2.8 .times. 10⁻⁷ (tertiary N). The following alkaloids were chromatographed on Partridge mixt. Detection was carried out with Dragendorff reagent (a), 0.2% ninhydrin in BuOH(b) and heating at 110.degree. or 1% sodium nitroprusside(c) and after treating with 10% NH₄OH. The following data were obtained: IV, Rf 0.72, red-brown(a), violet(b); Rf 0.72, red-brown(a); .gamma.-coniine, Rf 0.61, red-violet(a), red(c); VII, Rf 0.62, yellowish(a), violet(b). The influence of basicity and steric effects on the reactivity of the named

L7 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2002 ACS (Continued)
 alkaloids were discussed.

L7 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1960:91846 CAPLUS
 DN 54:91846
 OREF 54:17443a-g
 TI Synthesis of some quaternary granatanol esters of pharmacological activity
 AU Matkovics, B.
 CS Univ. Szeged, Hung.
 SO Acta Univ. Szegediensis Acta Phys. et Chem. (1959), 5 (No. 1-2), 47-52
 DT Journal
 LA English
 CC 10H (Organic Chemistry: Alkaloids)
 AB Pseudopelletierine was reduced to 3.beta.-granatanol (I), m. 99-100.degree. (picrate m. 264-5.degree.), by the method of Ciamician and Silber [Ber. 25, 1062(1892)] and to 3.alpha.-granatanol (II), hygroscopic [picrate 275-6.degree. (MeOH)], by the method of Alder and Dortmann (CA 49, 3984h). The granatanol obtained was extd. from benzene, the soln. dried over MgSO₄, evapd. and distd. under reduced pressure. Recrystn. from a mixt. 2:4 anhyd. benzene-petr. ether gave a very pure alc. O-Acetyl-3.beta.-granatanol (III) b₉ 135-50.degree. (picrate m. 201.degree.), and O-acetyl-3.alpha.-granatanol (IV), b₁₀ 172-90.degree. (picrate m. 204.degree.), were prepd. by distn. of the corresponding alc. with glacial HOAc under reduced pressure. The following quaternary deriva. were also prepd.: N,N-di-Me deriv. of IV, m. 329.degree.; N-Me, N-Et deriv. of IV, m. 337.5.degree.; N-Me, N-Pr deriv. of IV, m. 240.degree.; N,N-di-Me deriv. of III, m. 331.degree.; N-Me, N-Et deriv. of III, m. 289.5.degree.; N-Me, N-Pr deriv. of III, m. 290.degree..

L7 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1960:64687 CAPLUS
 DN 54:64687
 OREF 54:12490d-e
 TI Oscillographic characteristic of veratrum alkaloids
 AU Molnar, Ladislav; Molnarova, Klara
 CS Inst. Chem., Bratislava, Czech.
 SO Acta Polon. Pharm. (1960), 17, 1-6
 DT Journal
 LA English
 CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
 AB The oscillograms of jervine, pseudojervine, veratridine, protoveratrine A and B, gerrmine, germerine, cevine, protocevine, rubijervine, and isorubijervine are reproduced and discussed. Sufficient differentiation enables particular compds. to be identified and the sapon. rate of the esters detd. All detns. were made in 1-2N NaOH, LiOH, or LiCl.

L7 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1960:64686 CAPLUS
 DN 54:64686
 OREF 54:12490c-d
 TI Determination of solanum alkaloids
 AU Rozsa, Pal
 SO Gyogyszerezse (1955), 10, 6-8
 From: C.Z. 1958, 4569.
 DT Journal
 LA Unavailable
 CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
 AB Tropic acid (I) was detd. colorimetrically in I-contg. solanum alkaloids with p-dimethylaninobenzaldehyde in 50% H₂SO₄. For purification of the extd. soln., active charcoal was used. The soln. was made alk. with NH₃, and extd. with CHCl₃. The alkaloids can be extd. from the CHCl₃ with dil. acid. The alkaloid content of atropine tablets and injections, as well as leaves and galenical preps. was detd.

L7 ANSWER 29 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1958:89905 CAPLUS
 DN 52:89905
 OREF 52:15833e-g
 TI Oscillopolarographic characterization of veratrum alkaloids
 AU Molnar, L.; Molnarova, K.
 CS Chem. ustav, Slovenska akad. vied, Bratislava, Czech.
 SO Chem. zvesti (1958), 12, 287-303
 DT Journal
 LA German
 CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
 AB An oscillopolarographic method (I) for the detn. of Veratrum alkaloids (glucoalkaloids, esters, and alkamines) (II) in various electrolytes on current and drop electrode and on the 1st curve is described. Jervine, rubijervine, and isorubijervine in the presence of each other were detd. qualitatively by I. I is a good method for the evaluation of the rate of sapon. of II and the rate of veratridine sapon. in 2N NaOH is shown. The type of alkamine component of veratridine, germerine, and protoveratridine can be detd. by oscillograms which show that the cuts developed after hydrolysis in every case agree in the shape and the position with the cuts of corresponding alkamines.

L7 ANSWER 30 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1958:89904 CAPLUS
 DN 52:89904
 OREF 52:15833e
 TI Erythromycin
 AU Anon.
 SO Ann. pharm. franc. (1958), 16, 72-7
 DT Journal
 LA Unavailable
 CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
 AB Unavailable

L7 ANSWER 31 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1958:89903 CAPLUS
 DN 52:89903
 OREF 52:15833d-e
 TI Pro pharmacopeia. Streptomycin
 AU Anon.
 SO Ann. pharm. franc. (1958), 16, 66-72
 DT Journal
 LA Unavailable
 CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
 AB Description, method of assay, and handling of streptomycin as proposed for incorporation in the French pharmacopeia.

L7 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1958:79226 CAPLUS
 DN 52:79226
 OREF 52:14078e-h
 TI Trichloroacetates of several alkaloids
 AU Poethke, W.; Kuntze, Martin
 CS Friedrich Schiller Univ., Jena, Germany
 SO Pharm. Zentralhalle (1957), 96, 463-6
 DT Journal
 LA Unavailable
 CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
 AB The singular behavior of jervine trichloroacetate, which evolves CCl₃CO₂H (I) on melting or on long heating at 100.degree., occasioned the examn. of several other alkaloid trichloroacetates (II). Ephedrine (III) (0.5 g.) and 0.6 g. I dissolved in 4 ml. water by heating, cooled, rubbed, and the ppt. recrystd. from a small amt. of hot water gave III salt of I, m. 118-24.degree. (with considerable swelling). Similarly were prepd. the following salts of I d,l-III, m. 118-24.degree. (with considerable swelling); quinine di-I, m. 116-20.degree. (unsharp); brucine, m. 131-4.degree. (unsharp); strychnine (IV), m. 281-3.degree. (m.p. of IV since I was evolved between 250-60.degree.). Cond. measurements established that the II were strong electrolytes and true salts.

L7 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1958:79225 CAPLUS
 DN 52:79225
 OREF 52:14078a-f
 TI Methyl-naphthoquinone and methyl-naphthoquinone sodium bisulfite (vitamin K)
 AU Hahn, I.; Scheunert, A.; Seel, H.
 CS Anstalt Vitaminforsch. Vitaminprüfung, Potsdam-Rehbrücke, Germany
 SO Pharm. Zentralhalle (1956), 95, 138-43
 DT Journal
 LA Unavailable
 CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
 AB A description of menadione and menadione Na bisulfite as they will appear in a supplement to the German pharmacopeia (D.A.-B. VI). Most of the data correspond to those in U.S.P. XV, but in addn. color tests are described.

L7 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1957:40885 CAPLUS
 DN 51:40885
 OREF 51:7655d-f
 TI Alkaloids in Veratrum album var. lobelianum. I. Isolation and separation
 AU Tomko, J.; Dvorakova, B.; Bauer, S.; Mokry, J.
 CS Chem. ustav, Slovenska Akad. Vied, Bratislava, Czech.
 SO Chem. zvesti (1956), 10, 642-8
 DT Journal
 LA German
 CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
 AB The total alkaloids in V. album var. lobelianum, found in eastern Slovakia on "Cechovske pohor. acte.i" were detd. by gravimetric method and found to be 1.39-1.53%. From alkalines by the C6H6 extn. jervine, m. 247-8.degree., [.alpha.]D22.degree. = -150 .+-. 3.degree., was isolated. From glucoalkaloids by EtOH extn. after C6H6 extn. pseudojervine, m. 293-304.degree., [.alpha.]D22.degree. = -132 .+-. 3.degree., was isolated.

L7 ANSWER 35 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1957:40884 CAPLUS
 DN 51:40884
 OREF 51:7655c-d
 TI Enrichment of corn-steep liquor and molasses by the biomass and the metabolic products of lactobacillus in the formation of chlortetracycline
 AU Belik, E.; Zelinka, J.
 CS Vyskumny ustav antibiotik, Rostoky, Czech.
 SO Chem. zvesti (1956), 10, 593-8
 DT Journal
 LA German
 CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
 AB By lab. fermentation the production of chlortetracycline (I) was increased maximally by 10% and 18%, if corn-steep liquor (II) and molasses (III) were fermented completely by the inoculation of Lactobacillus dellbrückii S-54. If the ratio of II to III was 2:5 the production of I was increased from 1200 .gamma./ml. to 1600-1700 .gamma./ml.

L7 ANSWER 36 OF 37 CAPLUS COPYRIGHT 2002 ACS
 AN 1957:25595 CAPLUS
 DN 51:25595
 OREF 51:51011,5102a-b
 TI Initial study of the structure of a new antibiotic, congoicidine
 AU Julia, Marc; Joseph, Nicole
 SO Compt. rend. (1956), 243, 961-4
 DT Journal
 LA Unavailable
 CC 10 (Organic Chemistry)
 AB Congoicidine (I) is progressively degraded in base to C15H20O3N6 (II), NH3, and glycoconyamine (III). Further hydrolysis of II gave C15H19O4N5 (IV) and NH3. More drastic degradation of IV gave C12H14O3N4 (V) and .beta.-alanine. Thus, I was given the formula C18H26O3N10; HCl salt, m. 228.degree.; H2SO4 salt, m. 288.degree.; methyl orange salt, m. 224.degree.; picrate, m. 273.degree.. I in N NaOH at 20.degree. evolved NH3 and solid II, m. 263.degree.; picrate, m. 242.degree.; benzoate, m. 265.degree.. The filtrate was neutralized to give III; picrate, m. 218.degree.; HCl salt, m. 210.degree.. II in boiling N NaOH evolved NH3 and the solid IV sepd. as the monohydrate, m. 167.degree.; picrate, m. 250.degree.. If IV were boiled in 10N NaOH 2.5 hrs., then acidified with H2SO4, V.H2SO4, m. 240.degree., was obtained. .beta.-Alanine was also found in the mixt.

L7 ANSWER 37 OF 37 CAPLUS COPYRIGHT 2002 ACS

AN 1957:25594 CAPLUS

DN 51:25594

OREF 51:5100g-1,5101a-1

TI Jervine. X. Quaternary dihydro-1,3-oxazine salts as intermediates in the jervine rearrangement

AU Wintersteiner, O. P.; Moore, M. L.

CS Squibb Inst. for Med. Research, New Brunswick, NJ

SO J. Am. Chem. Soc. (1956), 78, 6193-9

DT Journal

LA Unavailable

CC 10 (Organic Chemistry)

GI For diagram(s), see printed CA issue.

AB cf. C.A. 50, 13057g. N-Acetyljervine (4.88 g.) in 125 cc. abs. MeOH satd. at 0.degree. with gaseous HCl kept 1 hr. at room temp. and evapd. to dryness in vacuo, the residue distributed between 500 cc. CHCl3 and 300 cc. H2O, the aq. layer extd. with 75 cc. CHCl3, the combined CHCl3 exts. washed with N HCl, aq. Na2CO3, and H2O, dried, and evapd. to dryness, and the residue (2.8 g.) recrystd. from MeOH-EtOAc yielded 1.56 g. N-acetyljervine, m. 203-4.degree. (all m.p.s. are cor.); the fine cryst. ppt. which had appeared in the aq. phase filtered and washed with cold H2O gave 1.65 g. quaternary chloride (I) (R = H and X = Cl) (II), m. 244-6.degree.; 2nd crop, m. 246-50.degree., 381 mg. II in AcOH ozonized, dild. with H2O, and distd., and the distillate treated with alc. dimedon gave only a few mg. trimeric self-condensation product of dimedon, m. 175-7.degree.. II (50 mg.) in 5 cc. MeOH treated at room temp. dropwise with 6 cc. 2N Na2CO3, dild. with 30 cc. H2O, and extd. with Et2O, and the ext. worked up yielded 32 mg. jervine 17-monoacetate, platelets, m. 250-3.degree. (from Me2CO-Et2O-pentane), [.alpha.]D22 -134.degree. (c 0.861, CHCl3). II (1.64 g.) in 150 cc. warm EtOH dild. with 12 cc. H2O, the soln. cooled, added to 960 mg. prerduced PtO2 in 10 cc. EtOH, and hydrogenated 70 min., the cryst. ppt. dissolved by adding 150 cc. H2O with slight warming, the soln. filtered from the catalyst and concd. in vacuo to a small vol., and the ppt. isolated by centrifuging gave 989 mg. HCl salt (III) of the tertiary base (IV) of II, m. 312-13.degree. (sometimes up to 320.degree.), [.alpha.]D25 -69.degree. (c 0.401, 80% EtOH). III (316 mg.) in 50 cc. MeOH and 20 cc. H2O treated with excess aq. NaHCO3 with stirring and the product isolated with CHCl3 yielded 212 mg. IV.0.5H2O, square platelets, m. 154-9.degree., [.alpha.]D25 -80.degree. (c 0.524, CHCl3). III treated with N KOH in MeOH at room temp. or reflux (3 hrs.) gave IV. III refluxed 2 hrs. with 3:1:1 EtOH-H2O-concd. HCl or refluxed 4 hrs. with 1% 2,4-(O2N)2C6H3NHNH2 in 1% HCl was recovered unchanged. IV (48 mg.) in 2.5 cc. 10% AcOH refluxed 3 hrs. with an equal vol. concd. HCl, basified, and extd. with CHCl3 yielded 24 mg. unchanged IV, m. 148-53.degree.. IV treated with Ac2O-pyridine gave IV 3,23-diacetate (V), clusters of needles, m. 201-2.degree. (from aq. and then abs. MeOH), [.alpha.]D25 -77.degree. (c 0.826). V treated 18 hrs. at room temp. with 5% KOH in MeOH yielded IV.0.5H2O. V in Et2O treated with HCl in Et2O gave V.H Cl, m. 247-52.degree. (from aq. MeOH). V in EtOH treated with 5N HCl and the EtOH boiled off quickly gave O-deacetylated III.2H2O. IV (42 mg.) treated with 2 cc. HClO4-contg. acetolysis reagent and the ppt. centrifuged after short standing and washed with EtOH gave V.HClO4, m. 281-3.degree. (from MeOH), [.alpha.]D23 -60.degree. (c 0.443, 80% EtOH). I (R = Ac, X = ClO4) (192 mg.) in 30 cc. 93% EtOH hydrogenated over 123 mg. prerduced PtO2 until 1.3 mole equivs. H had been absorbed gave V.HClO4, m. 265-7.degree., which decompd. with NaHCO3 yielded V. V (201 mg.) in 7 cc. Ac2O, 3 cc. AcOH, and 0.1 cc. concd. H2SO4 kept 46 hrs.

L7 ANSWER 37 OF 37 CAPLUS COPYRIGHT 2002 ACS (Continued)

at room temp., the soln. cooled, basified weakly with NaHCO3, and extd. with CHCl3, and the aq. phase distd. 1/3 into 25 cc. 2,4-(O2N)2C6H3NHNH2 reagent yielded 10 mg. 2,4-(O2N)2C6H3NHNH2:CHMe, m. 158-60.degree. (from abs. EtOH); the CHCl3 exts. washed, dried, and evapd., and the yellow resinous residue (152 mg.) dissolved in C6H6 and chromatographed gave 21 mg. V and then 11-oxoveratramine 3,23-diacetate (VI), needles, m. 238-40.5.degree. (from EtOAc), [.alpha.]D23 -113.degree. (c 0.586, CHCl3). VI (15 mg.) treated with Ac2O-pyridine gave the N-Ac deriv., m. 242-4.degree., [.alpha.]D24 -27.degree. (c 0.481, CHCl3). VI (2.0 g.) in 28 cc. Ac2O, 12 cc. AcOH, and 0.2 cc. concd. H2SO4 kept 17 hrs. at room temp., poured into H2O and crushed ice, basified slightly with NaHCO3, and extd. with CHCl3, and the residue (1.81 g.) from the ext. chromatographed from C6H6 on 50 g. Al2O3 gave after small amts. of unidentified material over 1 g. of solid which triturated with MeOH yielded 30 mg. VII (R = Ac) (VIIa), m. 208-9.degree. (decompn.) (from MeOH). VIIa (4.8 mg.) in 1 cc. EtOH and 1 cc. N HCl refluxed 4 hrs., cooled, and treated with excess BaCl2 gave 1.60 mg. BaSO4. VIIa (2.10 mg.) in 5 cc. EtOH contg. a small drop of 5% alc. KOH showed after 1 hr. an absorption max. at 250 m.m.u.. Further elution of the chromatographic column with MeOH and lyophilizing of the eluate gave Na salt (VIII) of VIIa. VIII (314 mg.) in 60 cc. 1:1:1 EtOH-H2O-20% HCl refluxed 1 hr., brought to pH 8 with Na2CO3, washed with CHCl3, reacidified, and treated with BaCl2 gave 86 mg. BaSO4; the residue (248 mg.) from the CHCl3 washing treated with Ac2O-pyridine yielded 214 mg. product which chromatographed on Al2O3 yielded 100 mg. stereoisomer of diacetyljervine, m. 226-30.degree. (from aq. EtOH), [.alpha.]D24 1.degree. (c 0.830, CHCl3).

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FILE 'REGISTRY' ENTERED AT 16:38:05 ON 24 JUN 2002

L1 STRUCTURE UPLOADED
 L2 6 S L1
 L3 88 S L1 FULL

FILE 'CAPLUS' ENTERED AT 16:39:07 ON 24 JUN 2002

L4 14 S L3/THU

FILE 'USPATFULL' ENTERED AT 16:45:20 ON 24 JUN 2002

L5 9 S L3

FILE 'CAOLD' ENTERED AT 16:47:52 ON 24 JUN 2002

S L1

FILE 'REGISTRY' ENTERED AT 16:48:01 ON 24 JUN 2002

FILE 'CAOLD' ENTERED AT 16:48:03 ON 24 JUN 2002

L6 20 S L3
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FILE 'CAPLUS' ENTERED AT 16:48:34 ON 24 JUN 2002

L7 37 S E1-E20/OREF

FILE 'STNGUIDE' ENTERED AT 16:52:44 ON 24 JUN 2002

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	1.38	394.38

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-30.97

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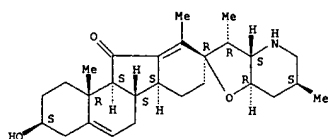
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L8      15 L3/USES
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L9      1 L8 NOT L4
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=> d ibib ab hitstr
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L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1994:695050 CAPLUS
 DOCUMENT NUMBER: 121:295050
 TITLE: Biological activity of some alkaloids in feeding process of larvae and adults of the Colorado potato beetle
 AUTHOR(S): Winiecki, Zbigniew; Proska, Bohumil; Voticky, Zdeno; Nawrot, Jan; Harmatha, Jura
 CORPORATE SOURCE: Inst. Ochrony Roslin, Poznan, 60-318, Pol.
 SOURCE: Mater. Ses. Nauk. Inst. Ochr. Rosl. (Poznan) (1993), 33(2), 52-6
 CODEN: MSNRDS; ISSN: 0208-4414
 DOCUMENT TYPE: Journal
 LANGUAGE: Polish
 AB The antifeedant and toxic properties of 21 alkaloids against larvae and adults of the Colorado potato beetle were tested. Six compds. appeared good feeding deterrent for beetles, three compds. were simultaneously antifeedants and insecticides. Veratrine was the most active compd.
 IT 469-59-0, Jervine 36069-05-3, Pseudojervine
 RI: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BIOL (Biological study); UUES (Uses)
 (antifeedant and toxic activity of some alkaloids in larvae and adults of the Colorado potato beetle)
 RN 469-59-0 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

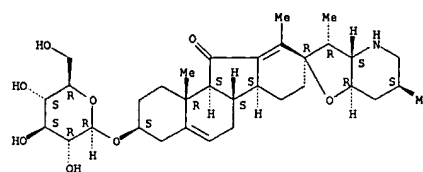
Absolute stereochemistry.



RN 36069-05-3 CAPLUS
 CN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 3-(beta-D-glucopyranosyloxy)-2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS (Continued)



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(FILE 'HOME' ENTERED AT 16:38:01 ON 24 JUN 2002)

FILE 'REGISTRY' ENTERED AT 16:38:05 ON 24 JUN 2002

L1 STRUCTURE UPLOADED

L2 6 S L1

L3 88 S L1 FULL

FILE 'CAPLUS' ENTERED AT 16:39:07 ON 24 JUN 2002

L4 14 S L3/THU

FILE 'USPATFULL' ENTERED AT 16:45:20 ON 24 JUN 2002

L5 9 S L3

FILE 'CAOLD' ENTERED AT 16:47:52 ON 24 JUN 2002

S L1

FILE 'REGISTRY' ENTERED AT 16:48:01 ON 24 JUN 2002

FILE 'CAOLD' ENTERED AT 16:48:03 ON 24 JUN 2002

L6 20 S L3

SEL AN 1-

FILE 'CAPLUS' ENTERED AT 16:48:34 ON 24 JUN 2002

L7 37 S E1-E20/OREF

FILE 'STNGUIDE' ENTERED AT 16:52:44 ON 24 JUN 2002

FILE 'CAPLUS' ENTERED AT 17:06:24 ON 24 JUN 2002

L8 15 S L3/USES

L9 1 S L8 NOT L4

pct32399

=> s veratramine/cn

L1 1 VERATRAMINE/CN

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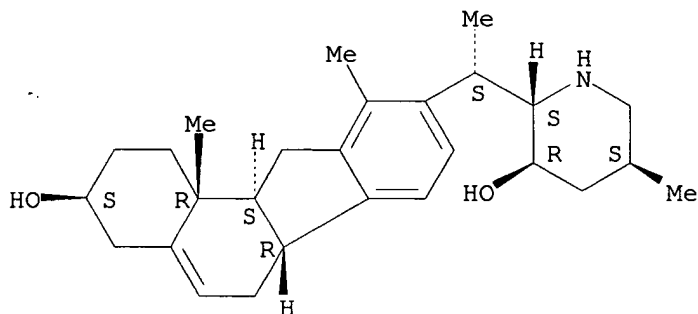
L1 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN 3-Piperidinol, 5-methyl-2-[(1S)-1-[(3S,6aR,11aS,11bR)-
2,3,4,6,6a,11,11a,11b-octahydro-3-hydroxy-10,11b-dimethyl-1H-
benzo[a]fluoren-9-yl]ethyl]-, (2S,3R,5S)- (9CI)

MF C27 H39 N O2

CI COM

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s cyclopamine/cn

L2 1 CYCLOPAMINE/CN

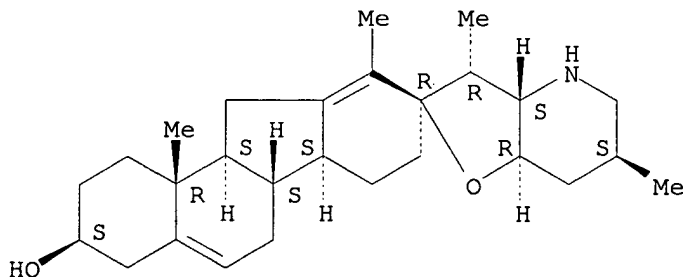
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L2 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN Spiro[9H-benzo[a]fluorene-9,2'-(3'H)-furo[3,2-b]pyridin]-3-ol,
1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-
3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
(9CI)

MF C27 H41 N O2

Absolute stereochemistry.



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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s cycloposine/cn

L3 1 CYCLOPOSINE/CN

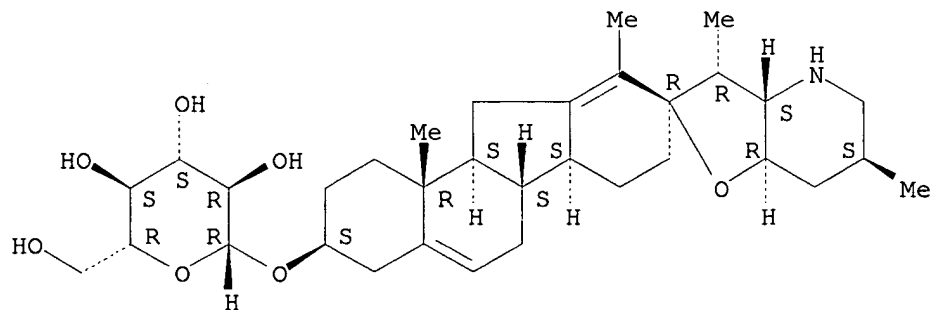
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L3 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN .beta.-D-Glucopyranoside, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-
3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-
b]pyridin]-3-yl (9CI)

MF C33 H51 N O7

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s jervine/cn

L4 1 JERVINE/CN

=> d scan

L4 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

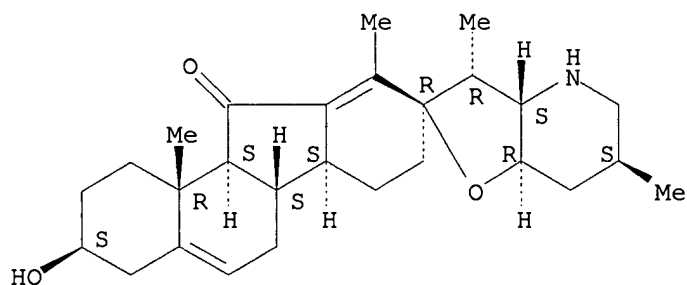
IN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one,
2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-
3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
(9CI)

MF C27 H39 N O3

CI COM

Absolute stereochemistry.

pct32399



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s muldamine/cn

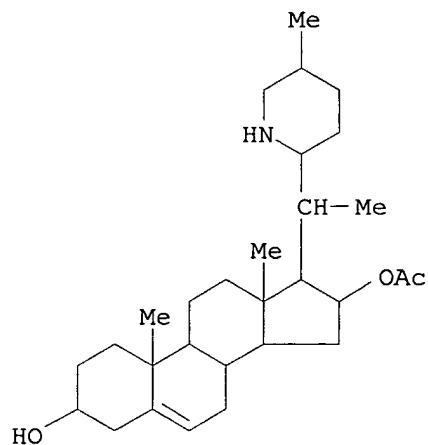
L5 1 MULDRAMINE/CN

=> d scan

L5 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN Pregn-5-ene-3,16-diol, 20-[(2S,5S)-5-methyl-2-piperidinyl]-, 16-acetate,
(3.β.,16.α.,20S)- (9CI)

MF C29 H47 N O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s mukiamine/cn

L6 0 MUKIAMINE/CN

pct32399

=> del 16 y

=> s zygacine/cn

L6 1 ZYGACINE/CN

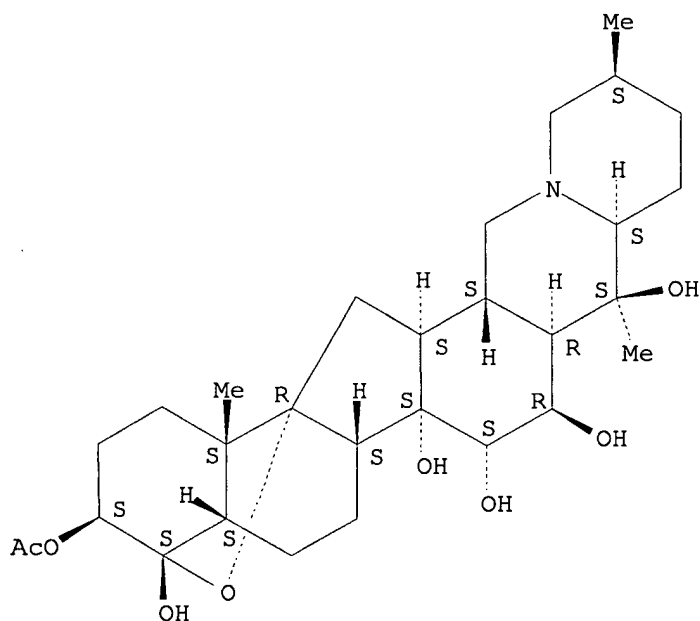
=> d scan

L6 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN Cevane-3,4,14,15,16,20-hexol, 4,9-epoxy-, 3-acetate,
(3.beta.,4.alpha.,15.alpha.,16.beta.)- (9CI)

MF C29 H45 N O8

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s solanidine/cn

L7 1 SOLANIDINE/CN

=> d scan

L7 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

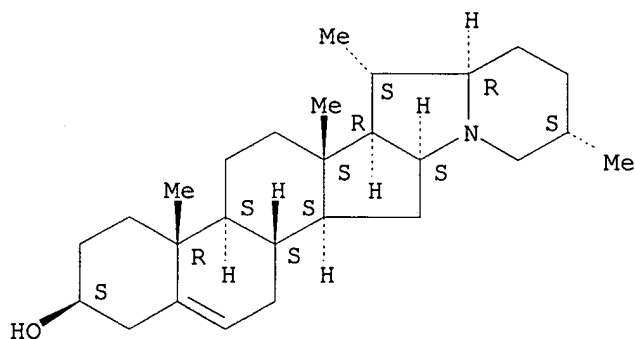
IN Solanid-5-en-3-ol, (3.beta.)- (9CI)

MF C27 H43 N O

CI COM

Absolute stereochemistry.

pct32399



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s solanine/cn

L8 1 SOLANINE/CN

=> d scan

L8 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN **Solanine (9CI)**

MF Unspecified

CI COM, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

ALL ANSWERS HAVE BEEN SCANNED

=> s chaconine/cn

L9 1 CHACONINE/CN

=> d scan

L9 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

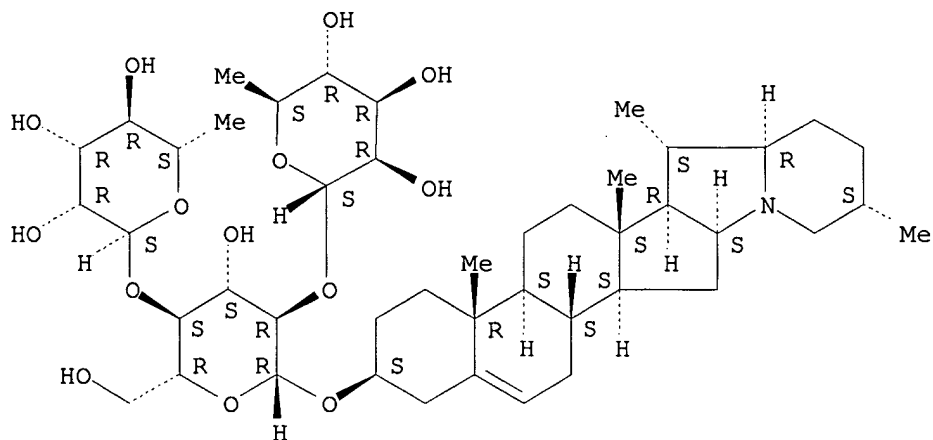
IN .beta.-D-Glucopyranoside, (3.beta.)-solanid-5-en-3-yl O-6-deoxy-.alpha.-L-mannopyranosyl-(1.fwdarw.2)-O-[6-deoxy-.alpha.-L-mannopyranosyl-(1.fwdarw.4)]- (9CI)

MF C45 H73 N O14

CI COM

Absolute stereochemistry.

pct32399



ALL ANSWERS HAVE BEEN SCANNED

=> s tomatidine/cn

L10 1 TOMATIDINE/CN

=> d scan

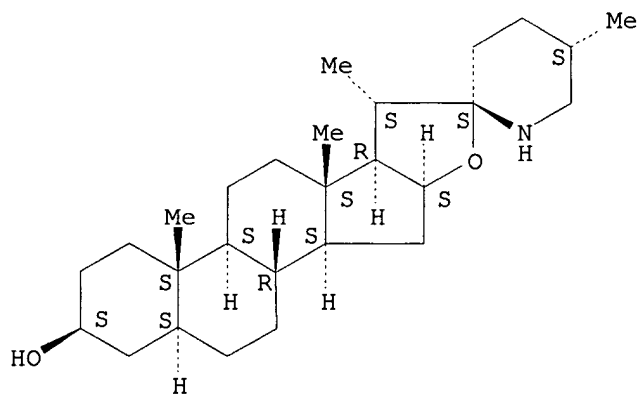
L10 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN Spirosolan-3-ol, (3.beta.,5.alpha.,22.beta.,25S)- (9CI)

MF C27 H45 N O2

CI COM

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s verticine/xn

'XN' IS NOT A VALID FIELD CODE

L11 0 VERTICINE/XN

pct32399

=> del l11 y

=> s verticine/cn

L11 1 VERTICINE/CN

=> d scan

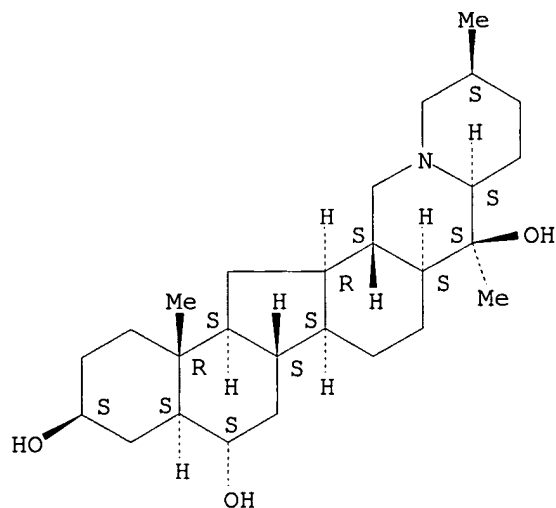
L11 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN Cevane-3,6,20-triol, (3.beta.,5.alpha.,6.alpha.)- (9CI)

MF C27 H45 N O3

CI COM

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s spirosolane/cn

L12 1 SPIROSOLANE/CN

=> d scan

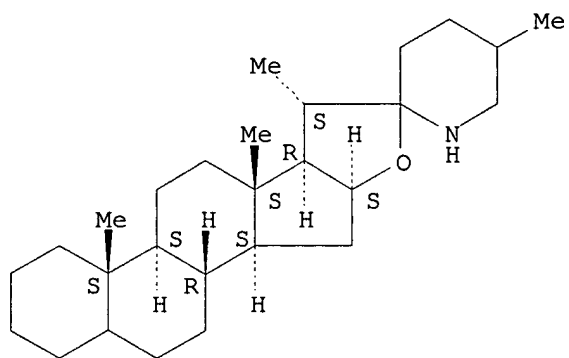
L12 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN **Spirosolane (9CI)**

MF C27 H45 N O

Absolute stereochemistry.

pct32399



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

09/886,818

=> s veratramine/cn

L2 1 VERATRAMINE/CN

=> d scan

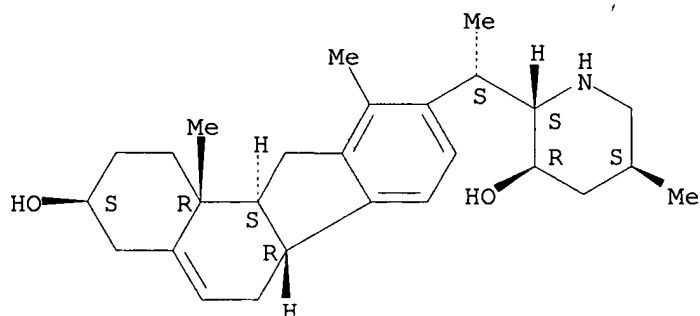
L2 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN 3-Piperidinol, 5-methyl-2-[(1S)-1-[(3S,6aR,11aS,11bR)-
2,3,4,6,6a,11,11a,11b-octahydro-3-hydroxy-10,11b-dimethyl-1H-
benzo[a]fluoren-9-yl]ethyl]-, (2S,3R,5S)- (9CI)

MF C27 H39 N O2

CI COM

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s cycloposine/cn

L3 1 CYCLOPOSINE/CN

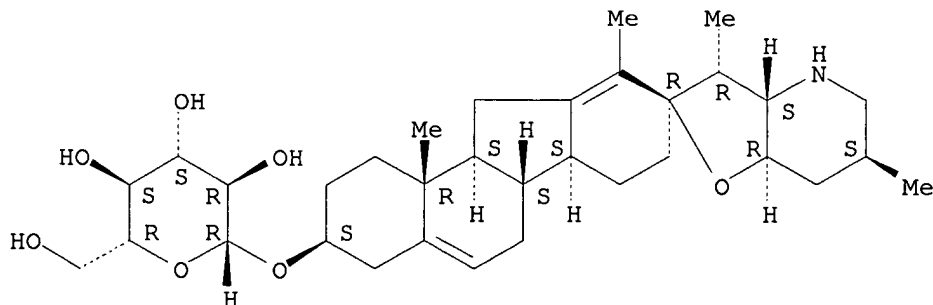
=> d scan

L3 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN .beta.-D-Glucopyranoside, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-
3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-
b]pyridin]-3-yl (9CI)

MF C33 H51 N O7

Absolute stereochemistry. Rotation (-).



09/886,818

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s muldamine/cn

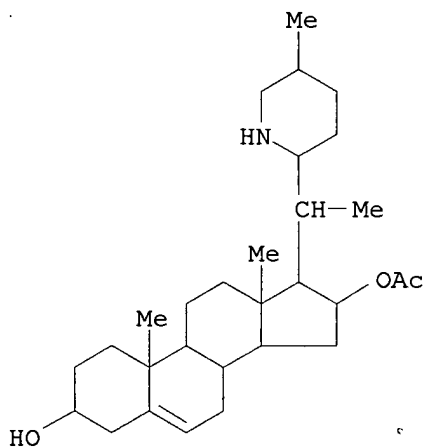
L4 1 MULDRAMINE/CN

=> d scan

L4 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN Pregn-5-ene-3,16-diol, 20-[(2S,5S)-5-methyl-2-piperidinyl]-, 16-acetate,
(3.beta.,16.alpha.,20S)- (9CI)

MF C29 H47 N O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s zygacine/cn

L5 1 ZYGACINE/CN

=> d scan

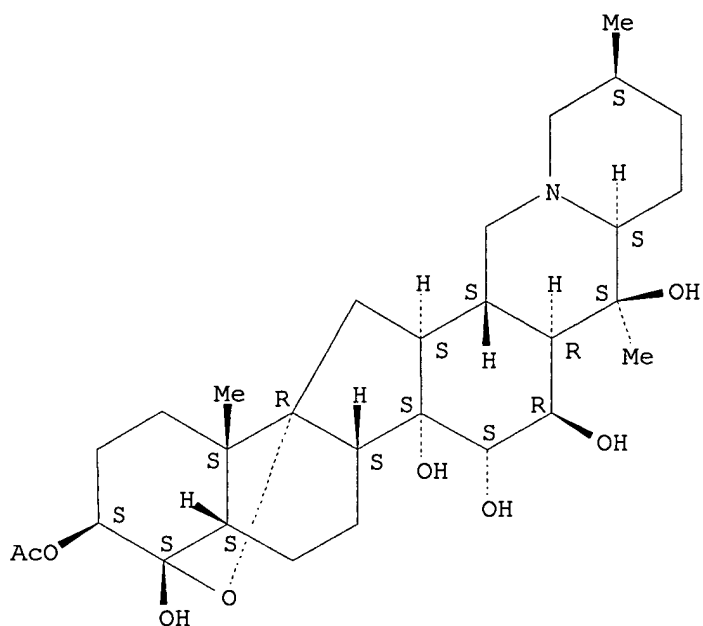
L5 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN Cevane-3,4,14,15,16,20-hexol, 4,9-epoxy-, 3-acetate,
(3.beta.,4.alpha.,15.alpha.,16.beta.)- (9CI)

MF C29 H45 N O8

Absolute stereochemistry.

09/886,818



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s solanidine/cn

L6 1 SOLANIDINE/CN

=> d scan

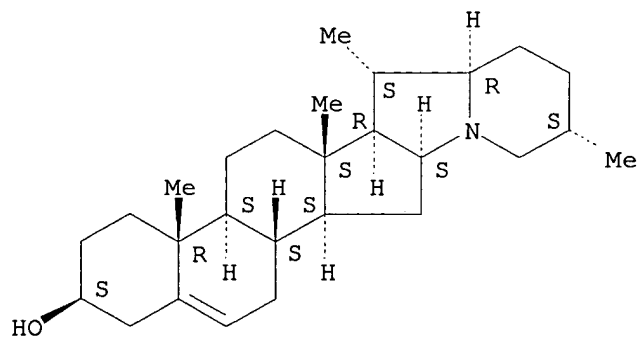
L6 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN Solanid-5-en-3-ol, (3.beta.)- (9CI)

MF C27 H43 N O

CI COM

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

09/886,818

ALL ANSWERS HAVE BEEN SCANNED

=> s solanine/cn

L7 1 SOLANINE/CN

=> d scan

L7 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN Solanine (9CI)

MF Unspecified

CI COM, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

ALL ANSWERS HAVE BEEN SCANNED

=> s chaconine/cn

L8 1 CHACONINE/CN

=> d scan

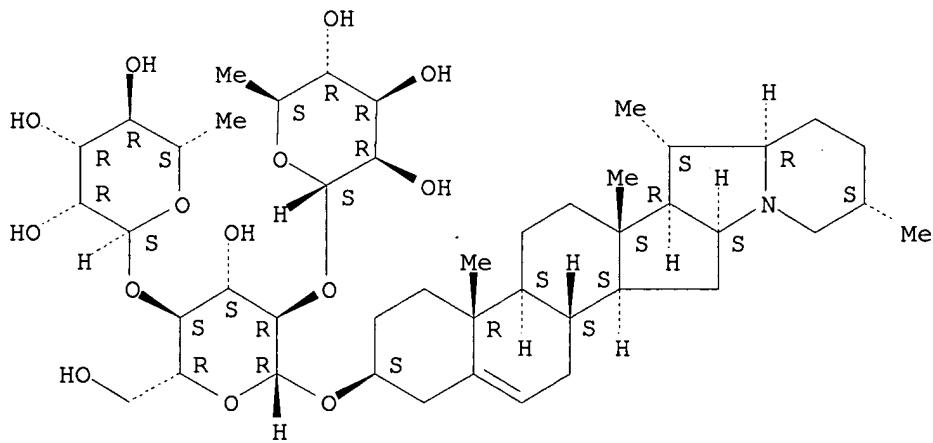
L8 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS

IN .beta.-D-Glucopyranoside, (3.beta.)-solanid-5-en-3-yl O-6-deoxy-.alpha.-L-mannopyranosyl-(1.fwdarw.2)-O-[6-deoxy-.alpha.-L-mannopyranosyl-(1.fwdarw.4)]- (9CI)

MF C45 H73 N O14

CI COM

Absolute stereochemistry.



ALL ANSWERS HAVE BEEN SCANNED